
Maternity Care:

A Comparative Report on the Availability and Use of Maternity Services

Data from the Demographic and Health Surveys Women's Module & Services
Availability Module 1993-1996

Mandy Rose
Noureddine Abderrahim
Cynthia Stanton
Darrin Helsel

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Carolina Population Center
University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 304
Chapel Hill, North Carolina 27516, USA



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List of Acronyms

CAR	Central African Republic
CBD	Community-based Distributors
CI	Childhood Immunisations
DHS	Demographic and Health Surveys
EOC	Essential Obstetric Care
EmOC	Emergency Obstetric Care
FP	Family Planning
ICPD	International Conference on Population and Development
LAC	Latin America and the Caribbean
MMR	Maternal Mortality Rate
PNC	Post Natal Care
SAM	Services Availability Module
SDP	Service Delivery Point
TBA	Traditional Birth Attendant
TMW	Trained Midwife
UNFPA	United Nations Population Fund
WHO	World Health Organisation

Executive Summary

The Safe Motherhood technical consultation held in Colombo, Sri Lanka in 1997 laid out priorities for reducing maternal mortality and improving maternal health over the next ten years. The conference endorsed a series of ten action messages of which one of the most critical was the need to improve women's access to good quality maternal health services. In so doing, the conference reaffirmed the priorities set two years earlier by the International Conference on Population and Development (ICPD) to provide access to care for *all* women. A further challenge and action message identified at Colombo was the need to develop tools and methods for measuring progress and assessing the impact of Safe Motherhood programmes.

The following report describes women's access to antenatal care, delivery care, emergency care and family planning services in ten countries in Africa, Asia, and Latin America and the Caribbean (LAC). These countries include Benin, Central African Republic (CAR), Mali, Uganda, Zimbabwe, Bangladesh, the Philippines, Indonesia, Bolivia and Haiti. The data were obtained from the Services Availability Module (SAM) and women's questionnaire from the DHS III surveys implemented between 1993 and 1996/7. Defining access as 'geographical proximity to services', measured as distance or time from a facility, the report provides a comparative assessment of the availability and use of maternal health services and shows how services availability influences services use.

The SAM methodology relies on key informants to provide information on the nearest facility of a certain type to each DHS cluster, allowing the availability of services to be assessed for a representative sample of women. Although the full module includes a validation of the community information by visiting the facility, during DHS III few countries carried out the facility survey and hence the information in this report relies on measures of *perceived* distance to services. In a refinement of this method, GPS units can be used to collect more objective information of the distances between the centre of the DHS cluster

and facility, rather than relying exclusively on community report.

The report shows that in most countries the majority of women attend for ANC, that a minority of women deliver with a skilled attendant, and that contraceptive practice varies widely between countries. However, wide variations between urban rural populations are demonstrated, highlighting the fact that many women, particularly in rural areas, lack access to services at every stage of their pregnancy. In urban areas at least 80% of women live within 5 km of a facility and travel times to services are only 10-15 minutes, but in rural areas less than half the population live within 5 km of the nearest facility and travel times are on average up to 90 minutes.

Although the report analyses only 10 countries, and is therefore limited in its capacity to draw any regional conclusions, differing patterns, both in the provision and use of services, are seen between the Africa, Asia and LAC regions. In Africa women are more likely to use services and deliver with a skilled attendant than in the other countries. In Asia fewer women deliver with a skilled attendant and many more deliver at home. This is despite the fact that women in Asia and LAC countries may live closer to services. Also, in Africa maternal health care is delivered by midwives, whereas in the remaining countries doctors provide the majority of care.

Importantly, the report also shows that the availability of maternal health services is consistently associated with greater use in every type of service considered. Rural women who live nearer health services are not only more likely to seek antenatal care more frequently and earlier in the pregnancy, but are also more likely to deliver at a health facility, more likely to use a skilled attendant and more likely to use a modern method of contraception. In addition, the report also demonstrates that distance is a greater disincentive to seeking care at the time of delivery than at other times during pregnancy.

The findings of the report have a number of policy implications. First, the report shows that for many women geographical access is a major barrier to receiving adequate care and for these women the priority must be to increase services coverage. Secondly, by demonstrating wide inequity in services provision between certain subgroups, the report also highlights the need for disaggregating national data by appropriate differentials in order to have better targeting of resources and greater equity in services provision.

Although the Services Availability Module has many limitations, in the context of a DHS survey, the method provides a cost-effective approach for monitoring women's access to services. As with any indicator, the findings cannot be used in isolation and should be triangulated with information from other sources to draw valid and meaningful conclusions.

Introduction

This report presents a comparative assessment of the availability and use of maternal health services in ten countries: five in Africa, three in Asia and two from Latin American and the Caribbean (LAC) region. The data were compiled from those countries undertaking a Services Availability Module (SAM) during the Demographic and Health Surveys carried out between 1993 and 1996. Specifically the report has the following objectives:

- To describe the availability of maternal health services and family planning services in the selected countries

- To compare the availability of health services and health service utilisation across countries
- To determine whether health services availability is associated with health service utilisation

The report is intended for international policy makers and national programme managers and others interested in the availability of maternal health services.

1. Background

1.1 The role of health services in improving maternal health status

Over the last 13 years, the Safe Motherhood Initiative has raised global awareness of the magnitude of the problem of maternal and perinatal mortality. Pregnancy complications are now widely recognised as the leading cause of death and disability in women of reproductive age (USAID, 1999). Each year an estimated 585,000 maternal deaths and 7.6 million perinatal deaths occur world-wide, mainly in the poorest and least developed countries of sub-Saharan Africa and Southeast Asia (WHO, 1999b).

At the outset of the campaign programme efforts focussed on identifying women at high risk and referring them in for care. More recently the understanding that most complications cannot be predicted or prevented has shifted the emphasis onto providing all women with access to care, most importantly the provision of a skilled attendant at birth (UNFPA et al., 1997).

Evidence of the impact that health services can have on saving the lives of women and infants comes from a wide range of historical and epidemiological sources. Significant reductions in maternal mortality were achieved in Northern Europe with the introduction of professional midwifery care for all births more than a century ago and more recently through community-based maternal health programmes in Sri Lanka, Cuba, China and Malaysia (UNFPA et al., 1997). Other studies have also shown that a skilled attendant at delivery can also have an impact on reducing perinatal mortality (WHO, 1999c).

Acknowledging the key role that health services play in reducing maternal mortality and improving maternal health, many international conferences, including the world conference for children, Beijing, and the International Conference on Population and Development (ICPD), have called for universal access to health care (UNFPA et al., 1997; Wardlaw, 1999). In 1995,

defining access to health care as a right, ICPD declared, "the rights of men and women (are) to be informed and to have access to family planning of their choice and the right of access to appropriate health care services that will enable women to go through pregnancy and childbirth." Amongst the goals laid down in a twenty-year programme of action was a closing of the gap in maternal mortality between developing and developed countries through strategies that included universal access to a full range of family planning methods and reproductive health services (UNFPA et al., 1997).

1.2 Measuring progress in maternal health

A major problem in assessing progress towards the goal of an overall reduction in maternal mortality has been the lack of standardised indicators and appropriate monitoring tools. Until recently, many countries relied primarily on measuring changes in the maternal mortality ratio or maternal mortality rate (MMR). The limitations of this approach are now widely appreciated, since these estimates have very wide confidence intervals that prevent their use for short-term assessment. Moreover, maternal mortality rates and ratios do not provide information on programme or health system performance and are costly to obtain.

Since 1992 a number of international agencies have recommended using process indicators to monitor programme performance (UNICEF/WHO/ UNFPA, 1997; MotherCare, 1999). Although process indicators such as immunisation coverage in child health and contraceptive prevalence in family planning are now standard, the use of process measures in maternal health has been limited. There is as yet no consensus on which indicators should be used in any given circumstance, although strategies to increase women's access to a skilled attendant should mean that the indicators of proportion of births with a skilled attendant will gain widespread acceptance. The WHO are also coordinating efforts to achieve a broad consensus through the

compilation of a short list of indicators for the global monitoring of reproductive health (WHO, 1997b).

Although, by definition, process measures cannot provide information on the outcomes of interest, maternal death and improved maternal health, they do have several immediate advantages over the MMR: they can be used for

monitoring; they provide information for local management decision making; and they may occasionally be derived from routine data. A disadvantage, nonetheless, is that the association between many of the processes measured and maternal outcome is weak (Villar & Khan-Neelofur, 1999), much weaker than the association between high immunisation coverage and lower infant mortality, for example.

Table 1.1: Health outcome and process indicators proposed by various agencies for monitoring maternal health goals

	Process Indicator	USAID	WHO	UNICEF	UNFPA
1	Proportion of women with antenatal care	X	X		X
2	Percentage of pregnant women with tetanus immunisation	X			X
3	Proportion of births by skilled personnel	X	X		X
4	Percentage of adults knowledgeable about maternal complications	X			
5	Number of basic EOC facilities per 500,000 population	X	X	X	
6	Number of comprehensive EOC facilities per 500,000 population	X	X	X	
7	Percentage of district hospitals with c-section and blood transfusion				X
8	Percentage of facilities with basic obstetric care				X
9	Percentage the population within one hour's travel time of EmOC		X	X	
10	C-sections as a proportion of all births in the population	X	X	X	X
11	Proportion of expected complications measured at EOC facilities met need for EOC	X	X	X	X
12	Admission to treatment time interval	X			

Note: USAID list based on short list of suggested indicators; WHO list based on minimal monitoring list; UNICEF list based on core list of suggested maternal health indicators.

Source: Campbell 1999.

A list of indicators proposed for monitoring maternal health status can be seen in Table 1.1¹ (Campbell, 1999). These indicators measure services quality, availability, accessibility and utilisation. Whilst the list includes several indicators that measure either services use or services availability (as a ratio of number of services to the population) only one, the percentage of the population within one hour's travel time of EOC, measures access in terms of its construct as a barrier to care (WHO, 1999a).

1.3 Measuring access and availability: defining terms

In general, the concept of access to care usually refers to the presence or absence of barriers that people experience when using health services. These barriers may include physical barriers, such as the general supply and availability of health services and distance from health facilities, as well as laws and policies which permit or prohibit use, community norms including knowledge of the services, cultural barriers or preferences, and economic barriers. (Bertrand et al., 1995). Although the term services availability may often be used synonymously with accessibility, in this report, services availability is limited to its definition as a measure of reported geographical proximity to services, i.e., the geographical distribution of services as measured by reported distance or travel time in relation to a surveyed population of women.

Examples of indicators of physical access to health services are

- the percentage of the population living within X km of a health facility
- the percentage the population within X hours travel time of a health facility
- the percentage of a population living within X km of a hospital providing functioning basic essential obstetric care (BEOC)

¹ Four of the indicators have been proposed for inclusion in the international short list of indicators for global monitoring of maternal health status. These are the proportion of women with antenatal care, the proportion of births by skilled personnel and the number of Basic Essential Obstetric Care (BEOC) facilities and Comprehensive Essential Obstetric Care (CEOC) per 500,000 population

- the numbers of facilities providing basic and comprehensive essential obstetric care (BEOC/CEOC) per X number of the population.²

Indicators of access/availability are important, since at a very basic level, health services need to be available in order for women to be able to use them. Low utilisation may arise as a consequence of women failing to use an available service or because services are too far away to be effectively available. In either case, fundamentally different programme strategies are required for resolving the problem. For some countries, however, such as those with rather more developed health systems and more numerous service delivery points (SDPs), measuring access to services may be considered of lesser importance than measuring quality of care or health services utilisation.

Compared to measures of service utilisation, measures of service availability have received relatively little attention. One contributory factor has been that utilisation is easier to measure; utilisation measures can be derived from a variety of sources that include routine health services data, sentinel surveillance and facility- and population-based surveys (Knowles, Leighton and Stinson, 1997), whereas availability data can rarely be measured in this way. Moreover, availability data derived from facility surveys is biased against non-users who are also most likely to live furthest from the facility. Representative data on geographical proximity therefore relies on special population-based surveys. One particular survey that collects this type of information is the DHS³ Services Availability Module (SAM) (Wilkinson, Wamucci and Abderrahim, 1993; Wilkinson, 1991). The SAM uses community self report of distance and time

² BEOC facilities should be able to administer injectable antibiotics, oxytocics and anticonvulsants and perform manual removal of the placenta, retained products and assisted vaginal delivery. CEOC facilities should be able to perform all the BEOC functions and, in addition, provide caesarean section and blood transfusion.

³ DHS surveys are conducted in 5-year cycles. DHS III followed after DHS I and II and were conducted between 1993-1997. The Current DHS survey project is known as DHS + (plus) rather than DHS IV.

to the nearest facility to derive estimates of geographical proximity. Increasingly, however, the SAM is collecting information on the geographic location of communities and facilities with Global Positioning System (GPS) Units rather than relying on self report in order to obtain more objective information. Data collected in this way can be analysed within a Geographic Information System (GIS) to provide new measures of accessibility based on proximity to roads and travel speeds (Montana, personal communication).

In the following report, data on the proximity of health facilities collected by the DHS III SAM surveys between 1993-1996 have been analysed in order to describe the availability of maternal health services and to explore the feasibility of the method for deriving indicators of health services availability. In addition, the same data have been linked with the data from the DHS women's questionnaire in order to determine whether there is an association between the availability of health services and their use by pregnant women.

1.4 Review of influence of distance on care seeking

Most of the evidence in support of the role that distance plays in influencing care seeking behaviour and health care utilisation has been derived from the literature on family planning. Early research, carried out during the world fertility surveys examined the impact of distance, time and mode of transport on family planning use and found that distance acts both as a physical barrier and a disincentive to seeking care (Pillum, 1991). Subsequent studies have shown that distance only partly determines the choice of health care provider and that the effect of distance is shaped by a complex interaction of social, economic and cultural factors and perceived quality of care (Bertrand et al., 1995; Egunjobi, 1983). In some studies the effect of distance has been found to be quite small (Tsui and Ochoa, 1992), whereas others have shown that, after controlling for perceived quality of care, the effect of time and distance disappear (Mroz et al., 1999).

Whether it is appropriate to extrapolate from studies in the family planning literature to look at the influence of distance on care seeking during pregnancy, illness or at the time of delivery is unclear. Certainly the motivations of pregnant women are going to differ fundamentally from those women wanting contraceptive services (Prevention of Maternal Mortality Network, 1992). Moreover, the effect of distance is likely to vary according to whether the care seeking is for a planned event such as an antenatal care visit or is for an unscheduled event such as the onset of labour in the context of an emergency. Relatively few studies have examined the very special circumstances that are likely to prevail around the time of delivery; for example, the unpredictable onset of labour, its unknown duration (which will affect the assessment of perceived benefit of reaching care with the risk of delivering on route), and the physical difficulties of travelling when labouring.

Studies that have been conducted employ a variety of methods including community-based interviews, and facility record review to determine the catchment population radius and assess the severity of illness in patients arriving at a health facility related to the distance travelled (Okafor, 1991; Egunjobi, 1983; Stock, 1983). Distance is one of several factors that have been shown to affect attendance at antenatal care (Okafor, 1991) and hospital choice (Egunjobi, 1983). In a study of the determinants of home births in Kenya, (Hodgkin, 1996) the household's distance from the maternity facility was one of two significant predictors of attendance, with considerations of cost (i.e., whether a family member had health insurance) being the other. In another study from Nigeria, per capita use of the health facility declined exponentially with distance. However, significant differences in the interaction between care seeking and distance were seen in association with other variables including perceived quality of care and severity of illness. The study found that hospitals and large health centres were able to attract patients from wider catchment areas than smaller facilities and that distance from the health facility was positively associated with duration and perceived severity of illness (Stock, 1983). A similar effect was also shown in a study of clinic

attendance for diarrhoea where severity of dehydration at presentation was positively associated with distance from the clinic (Rahman et al., 1982).

Overall, the individual studies reviewed for this report and reviews of the determinants of maternal mortality and maternal care seeking behaviour (Thaddeus and Maine, 1994; Prevention of Maternal Mortality Network, 1992; McCarthy and Maine, 1992) suggest that distance exerts a measurable effect on health services use but that the strength of this association varies.

2. The Development and Purpose of the SAM

The DHS Service Availability Module, developed in 1984, was originally designed to provide data to complement the DHS survey in an attempt to measure progress towards the USAID goal that 80% of couples would have access to family planning services by the year 2000. The main purpose of the module was to provide a means of measuring the availability of family planning services in a representative population of *women* rather than to provide data that would be representative of health facilities. A total of 23 SAM surveys have been carried out since 1984. Most of the content and the analyses of the SAM surveys to date have focused primarily on family planning and have included relatively little information about health. Generally, DHS service availability reports have been limited to one table describing the percent distribution of women of reproductive age or children under five by distance to the nearest health facility. In addition, the data on maternal and child health services have been collapsed into the broader category of maternal and child (MCH) services so it has been impossible to determine whether the services are primarily catering to women or children or both.

2.1 The content and methodology of the SAM

The DHS SAM has two components, a community-level survey and a facility survey. In many cases however, as for most of the DHS III surveys, only the community survey was conducted. In the community survey, interviews are conducted with three to four knowledgeable residents from each DHS cluster, at least one of whom must be female. Usually these interviews are performed in a group setting, although occasionally the information is obtained from a series of individual interviews. During these interviews general information is collected about the community such as the relative location of the cluster (e.g., distance to the nearest town, the main means of access) as well as information about community infrastructure and the availability of local services.

For all family planning and MCH services, the questionnaire first establishes whether a particular *type* of health facility/service exists and then determines the name of the nearest facility/service of each type. For example, informants are asked about the availability of hospitals, health centres, clinics, pharmacies and private doctors and then asked to identify each one by name. This is followed by a series of questions to assess the geographical access to these facilities including the distance and the time needed to travel to the facility and the most common means of transport. It is important to note that the distances recorded are the distances to each facility from the centre of the cluster and thus represent an average for the cluster population. Questions are also asked about the types of services provided. In general, these questions are limited to the availability of antenatal care (ANC), delivery care (DC), child immunisations and family planning (FP).

In the facility survey, the nearest facility of each type is visited to validate the information already collected from the community. These visits are limited to those health facilities that are situated within a reported 30 km radius of the DHS cluster.

In order to construct the tables in the report the community-level data from the SAM are merged with the records from the DHS women's file for the women from the same cluster. By merging the community and women's data, data on the geographical proximity to services can be presented for the women surveyed in the DHS. Further information on the DHS Service Availability Module methodology can be found in Wilkinson, Wamucci and Abderrahim, 1993 and Wilkinson, 1994.

2.2 Limitations of the SAM

The limitation of the SAM methodology is that the survey is designed only to collect relevant information on the nearest facility or service of each type (hospital, health centre, clinic, pharmacy or private doctor) to the DHS cluster. The

assumption implicit in this approach is the nearest health facility most accurately reflects the health service environment available to any community. In rural areas, where the choice of health facility is very limited, the nearest health facility may well provide a fairly accurate representation of the true availability of health services in the 'formal' sector, but this would not be true of urban areas where health facilities are far more numerous. A further assumption made for the purposes of this report is that the nearest facility also represents the most used facility. Contradicting this assumption, as previously mentioned, is that some clients, even in rural areas, are prepared to travel very long distances to obtain services that are perceived to be effective and of good quality (Thaddeus and Maine, 1994). Furthermore, the nearest facility may not be the most accessible. Poor roads or the local topography may make travel to a more distant facility preferable, particularly if there are better roads or local transport services (Stock, 1983). For this reason analyses of the influence of use and proximity have been confined to rural areas.

A second limitation is that the SAM does not record information on the provision of care from the informal/traditional health sector other than enquiring about the availability of traditional birth attendants (TBA). In countries where a large proportion of care is delivered outside the formal sector, the community concept of health services environment and health care provider may be very different from those defined by the SAM.

2.3 Limitations of a comparative report

During DHS III, for a variety of reasons, facility surveys validating the community data were carried out in only Indonesia and Bolivia. Since the facility data were restricted to two countries, they were not analysed and the data presented here are the results of the analysis of the community surveys alone. As the distances reported by key informants in the community surveys were not validated by visits to the facilities, they represent only the *perceived distance* to services rather than the actual distance. Previous assessments have suggested that perceived availability

may not be a reliable proxy for actual availability (Wilkinson, Abderrahim and Wamucci, 1993). Low perceived availability of services may reflect either actual low coverage or a lack of community awareness of services provision – problems that need to be addressed by fundamentally different programme strategies. A number of independent studies from Ecuador and Zimbabwe contradict these findings, suggesting, to the contrary, that community reporting on distance and coverage of services can be fairly accurate (Wilkinson, Abderrahim and Wamucci, 1993).

Because of the very wide variation between countries in the way that health systems are designed and managed, considerably more adaptation is required to the core SAM module to account for country-specific situations than for other DHS surveys. Most of the countries in this report made a large number of individual adaptations to the original core questionnaire. Where these differences are significant enough to affect the interpretation of the results, these have been noted in footnotes in the tables and more complete details of the structure of the individual questionnaires is given in the appendix. In addition, variations in how DHS data was managed and processed across countries also added to the difficulties of writing a comparative report. There were variations, first, in the types of facilities about which questions were asked in the SAM community survey. Although all countries asked about the five main categories of facility or service, some limited data collection. For example:

- Zimbabwe asked about private but not public pharmacies and health centres in only rural areas.
- Uganda asked about health centres in urban areas but not rural areas and questions relating to the proximity of maternities, dispensaries and sub-dispensaries were combined under one category in the questionnaire.
- CAR asked about private doctors in only urban areas.

Secondly, there were also variations in the data on the timing of births recorded in the DHS

surveys. For example, five countries recorded data on all births in the three years preceding the survey, one on all births in the four years preceding the survey and three on all births in the five years preceding the survey. Third, there were variations in the DHS related to how information about the presence of a birth attendant was asked and recorded. In Haiti, for example, information about skilled midwives and traditional birth attendants (*matrones*) were recorded together, preventing a retrospective assessment of the proportion of women attending with either. In the SAM there were also variations in how community respondents answered questions about the distance to the nearest facility. Whilst in theory there is always a nearest health facility, informants varied in their knowledge of facilities, particularly those located far away. Idiosyncrasies in the manner in which countries chose to process this distance data added to the problem of making a valid international comparison. In some countries where health facilities were assessed as being in the area, distance to the health facility was NOT recorded, as in the case of Haiti and Indonesia. In this instance when the local area was very small, the average distance to services will have been underestimated.

Finally, the quality of the SAM data from some countries was not optimal, and, in the case of CAR, the data contain a very high percentage of missing responses. For these reasons the data have been presented in the tables but have not been commented on in the text.

2.4 Data sources

Fifteen countries collected SAM data between 1993 and 1996 when the DHS-III surveys were being conducted.⁴ These countries are listed in Table 2.1. Data for the report however are based on only 10 of the 15 countries. These are five sub-Saharan African countries (Benin, Mali, Central African Republic, Uganda, Zimbabwe),

⁴ This report is restricted to SAM surveys conducted under DHS-III. Previous SAM surveys conducted under DHS II are now more than ten years old and are listed in the appendix.

two Latin American/Caribbean countries (Bolivia, Haiti) and three Asian countries (Philippines, Indonesia, Bangladesh). Chad, Côte d'Ivoire, Kenya, and Mozambique are excluded from the report because the final reports were incomplete at the time of the initial analysis, and the lack of rights to the data for Eritrea prevented further analysis.

Sample sizes for these surveys varied substantially according to the size and distribution of the population. In Latin America and Africa, sample sizes varied between 5,000 to 9,700 women. This compares to a sample size of over 15,000 in the Philippines and more than 28,000 in Indonesia. The number of clusters varied accordingly, from between 200 and 300 in Africa, over 700 in the Philippines and 1400 in Indonesia.

Apart from Indonesia and Bangladesh, where only ever married women were interviewed, in all other countries all women of reproductive age were surveyed. Data derived from the DHS on health services utilisation is presented for all women, but that derived from the SAM is presented on *currently* married women only. Restricting the analyses in this way excludes data on births to unmarried women. This means effectively that up to 5% of births are excluded in Mali, Indonesia, Bangladesh and the Philippines, between 5-10% of births in Benin, Bolivia and Haiti, and between 12-13% of births in the CAR, Uganda and Zimbabwe. These births are only excluded in the tables on the use and availability of services. However, analyses of the use of services by married and unmarried women are similar. Where there are differences, they tend to show that unmarried women are *more* likely to deliver with a skilled attendant, but the numbers are small and differences not significant. Future reports, however, should not restrict analysis in this way.

2.5 Presentation of the data

This report includes five sections on the availability and use of services: (1) a discussion on the availability of facilities and services on any type, (2) the availability of antenatal services, (3) the availability of delivery services, (4) the

availability of emergency care, and (5) the availability of family planning services. In each section there are four different types of tables and graphs. These include tables and graphs on

- a) service utilisation from the DHS women's survey
- b) the availability of services
- c) the association between service availability and health service utilisation
- d) a multivariate analysis of the proximity and use of services

Data on services utilisation were taken directly from DHS reports from the respective countries for tables of type *a*. The latter three were derived by linking the DHS household data with the proximity data obtained in the Services Availability Module. Analysis of the association between distance to health facility and health services use has been limited to that for women living in RURAL areas only. This is because the SAM collects information about the nearest facility of each type, and, whereas in rural areas there may be only one facility of a certain type, this is unlikely to be true in urban areas, as Table 4.1b demonstrates. Implicit in this analysis is the assumption that use is associated with proximity to the nearest facility. Since there are effectively many 'nearest facilities' in urban areas the analysis has been confined to RURAL populations.

Data in the report are displayed as graphs or as simple tabulations and are stratified by urban/rural residence and distance from the health facility. This relatively simple analysis of the relationship between availability and use does not control for confounding by other factors such as socio-economic status, education and other factors. Although a thorough examination of confounding would require a sophisticated analysis beyond the scope of this comparative report, some limited multivariate analyses have been carried out to explore these findings in more depth.

Information on the availability of abortion care, post-partum care, STD and HIV services is not included in the report since no country collected data concerning the availability of abortion services and only a minority of countries col-

lected any data related to the latter three services.

Table 2.1: Details of the community and facility level surveys in DHS III

Countries with SAM	Year of field work	Previous SAM exists?	SAM results included in DHS country report	Facility-based/ Community/ Both modules used	Sample size+	Number of clusters in DHS sample	Number of clusters SAM was carried out
DHS III:							
Africa							
Benin	1996	No	Yes	C	5491	200	200
CAR	1994/1995	No	Yes	C	5884	231	231
Mali	1995/1996	No	Yes	C	9704	300	300
Uganda	1995	Yes (DHS I)	Yes	C	7070	303	296
Zimbabwe	1994	Yes (DHS I)	No	C	6128	230	230
Asia							
Bangladesh*	1993/1994	No	Yes	Other*	9640	301	301
Indonesia	1994	No	Yes	B	28168	1416	1416
Philippines	1993	No	Yes	C	15029	750	750
Latin America							
Bolivia	1993/1994	No	No	B	8603	616	616
Haiti	1994/1995	No	Yes	C	5356	172	172

Notes:

* Due to the use of mobile clinics the SAM is substantially different in Bangladesh from the DHS model instrument.

+ Women aged 15-49 years surveyed in all countries except Bangladesh and Indonesia where only ever married women were surveyed.

F=Facility module used; C=Community modules only; B=Both modules.

3. Community Characteristics

Most women in the ten countries in this report live in rural areas, except in Bolivia where three-quarters of the surveyed women live in the capital city and other urban areas. In three countries, Mali, Uganda and Bangladesh, three-quarters of the total female population live in rural areas.

Rural populations, however, may not all be equally 'rural'. Rural women living close to urban centres are much more likely to have access to urban services and health facilities than women living in remoter areas. Since an urban/rural classification is assigned independently by each country there are likely to be variations between countries and significant differences may well confound a comparative perspective. Figure 3.1, which shows the percent distribution of rural women in relation to the distance to the nearest town of 20,000 inhabitants or more, illustrates this problem. In the Philippines and Bangladesh, most rural women

live within 10 km of the nearest town of 20,000 or more inhabitants, but in other countries, particularly in Africa, rural populations are much more remote. Most rural women in Africa live further than 10 km from the nearest town and in Zimbabwe approximately three quarters of the rural population live further than 50 km from the nearest town (See Appendix Table 3.1.).

In addition to the remoteness of the rural settlement, the topography and road infrastructure can have a major influence on a community's ability to access health care. In four countries, Benin, Uganda, the Philippines and Bolivia, at least half the rural population have access to an all-weather road. In Zimbabwe, almost all rural women travel on all-weather roads. By contrast the majority of rural women in Mali and Haiti live in communities accessed only by a seasonal road, whilst in Uganda, 13% of women rely on using a river path or train line for access.

Figure 3.1
Percent distribution of currently married women aged 15-49 by rural residence

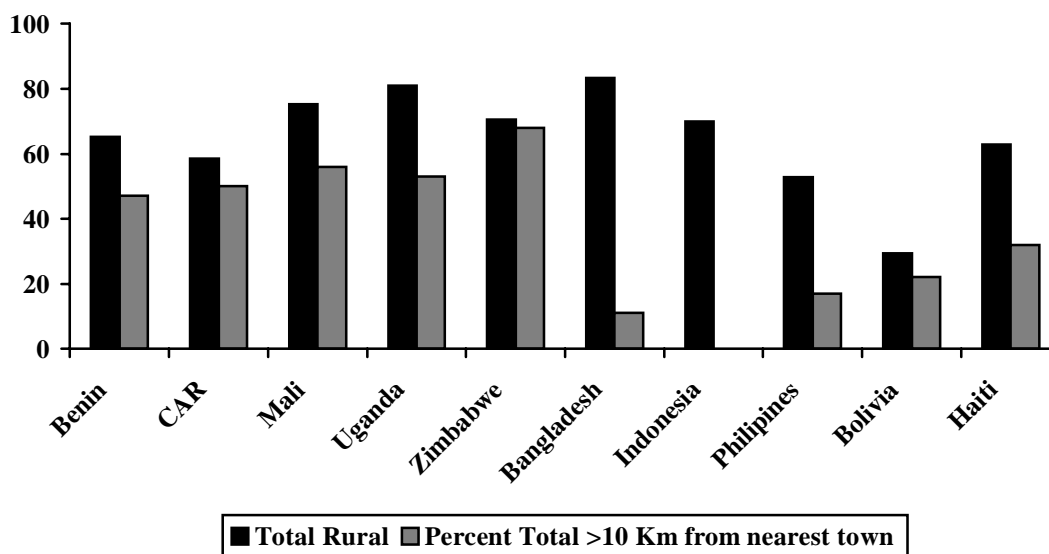
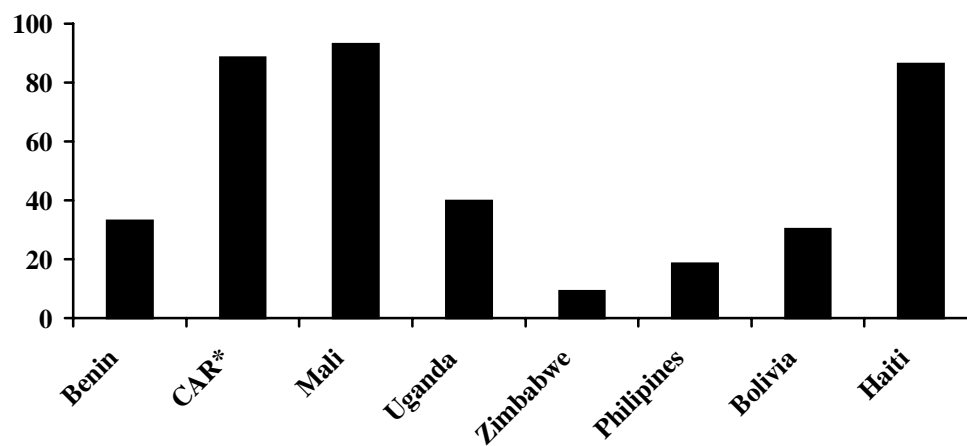


Figure 3.2
Percent distribution of currently married RURAL women aged 15-49 relying on a seasonal road, river, path or train track for access to their community



4. The Availability of MCH Services

Tables and Figures 4.1–4.6 show where women live in relation to health facilities: the distance to the nearest facility, the travel time and the overall density of health facilities, in order to provide an overall assessment of the health services environment.

4.1 Choice of health facilities

As Tables 4.1a and 4.1b show, urban women have a much greater choice of health facilities and services than their rural counterparts. Almost all women have a choice of at least four facilities within a radius of 30 km and two-thirds of urban women live in clusters with at least seven. Fewer than 5% have a choice of only one facility or none at all. Although most rural women have a choice of at least two health fa-

cilities, one in five Zimbabwean women has access to only one facility and one in 20 women in Mali has no health facility at all.

Rural women in Benin and Uganda have the greatest choice of facilities. In both countries, at least half the rural population live in clusters with seven or more health facilities within 30 km.

Table 4.1a: Density of Rural Health Facilities

Percent distribution of currently married RURAL women living in clusters by the number of facilities (health centres, clinics & hospitals) available within 30 km

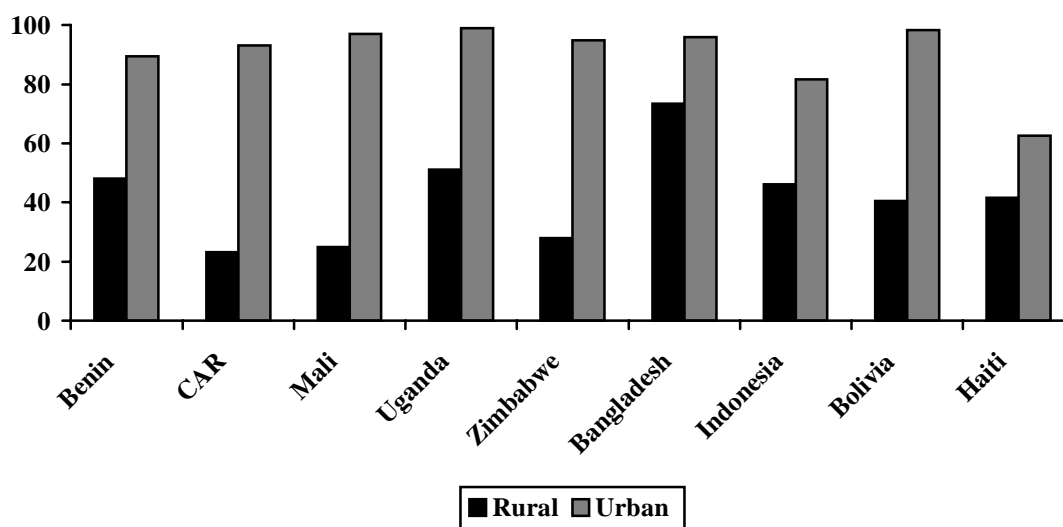
Country	Sum of facilities within 30 km						Total	N
	0	1	2-3	4-6	7+	Missing		
Benin	0.6	6.3	13.7	25.6	53.9	0.0	100.0	2,739
CAR	4.6	13.0	21.7	13.9	8.3	38.6	100.0	2,562
Mali	5.4	5.0	22.8	36.9	29.8	0.2	100.0	6,044
Uganda	0.0	5.4	11.1	21.7	59.8	2.1	100.0	4,523
Zimbabwe	2.2	21.4	33.9	23.1	19.3	0.0	100.0	2,674

Table 4.1b: Density of Urban Health Facilities

Percent distribution of married urban women living in clusters by the number of facilities (health centres, clinics, hospitals) available within 30 km

Country	Sum of facilities within 30 km						Total	N
	0	1	2-3	4-6	7+	Missing		
Benin	0.0	3.0	5.5	19.7	70.2	1.4	100.0	1,459
CAR	0.9	3.0	7.4	22.3	59.9	6.4	100.0	1,521
Mali	0.0	1.6	6.0	13.2	79.3	0.0	100.0	2,178
Uganda	2.1	4.3	5.7	5.7	86.8	1.1	100.0	614
Zimbabwe	0.0	1.5	0.9	1.8	95.3	0.5	100.0	1,114

Figure 4.1
Percent distribution of currently married women aged 15-49 who live within 5 km of a any facility by rural/ urban residence.



4.2 Distance to the nearest health facility or private doctor (excluding pharmacies)

Between 40 and 75% of all women live within 5 km of the nearest health facility. Women live closest to facilities in Bangladesh and Bolivia and furthest away in Mali (Figure 4.1, Appendix Table 4.2.) On average women live less than a kilometre from a facility in Bolivia (most of the surveyed women live in cities) and 7 km in Mali. These national aggregates disguise marked urban/rural differentials in services provision, however.

In urban areas, women have easy access to services. The median distance to services is 2 km and in all countries except Haiti, four out of five women live within 5 km of the nearest facility. By contrast, in rural areas, excluding Bangladesh, less than half of the female population live within 5 km. Rural populations of Zimbabwe and Mali have the worst access to services with around a quarter of rural women or less living within 5 km of the nearest service provider. Median distances to rural services range from 3 km in Bangladesh to 8 km in Zimbabwe and over 10 km in Mali.

4.3 Distance to the nearest facility providing MCH services

Appendix Table 4.3 shows where women live in relation to the nearest facility providing MCH services (ANC, delivery care or family planning.) This question was not asked in every country and complete information is available for only seven countries.

Since not all health facilities provide MCH services, median distances to a MCH service are greater than the median distance to any facility shown in Appendix Table 4.2. These distances range from 2 km in Indonesia to 8 km in Mali. Once again in this table, as in almost every other in this report, very wide disparities in services provision between rural and urban areas emerge.

Access to services in rural Africa is best in Benin (median distance to services 5 km) and worst in Mali (median distance 11-13 km.) In

Mali, Uganda and Zimbabwe more than half the rural female population live further than 5 km from the nearest MCH facility, and in Mali more than one-third of women live beyond 15 km.

Women in Indonesia and Haiti live closer to facilities than women in Africa, (median distance to an MCH facility respectively 1 km and 3 km for urban women, and 3 km and 7 km for rural women.) In Haiti the median is likely to be an overestimate of the true figure since a distance was not recorded when services were reported “on site” in the rural clusters.⁵

Median distances for different types of service *within* countries are also similar, although, in general, ANC services are marginally closer overall than delivery services. In rural areas, this might be expected since the few health facilities that exist often offer a range of services and provide both ANC and delivery care. It might be anticipated that the availability of family planning services would differ from the availability of other MCH services since in rural areas family planning commodities are often available at local pharmacies; however, family planning services are often less freely available in rural clinic settings. No variation in availability was seen in this analysis.

4.4 Travel time to the nearest MCH facility

Whilst travel time to services might seem a more appropriate measure in poor communities than estimates of perceived distance, international comparisons of time are difficult because of the need to make allowance for a mode of transport.

The reported travel time to ANC, delivery care and family planning is shown in Appendix Table 4.4. For all women, travel times to services ranged between 10 minutes in Indonesia to 60 minutes for women in Haiti and Uganda. In urban areas, where women live much closer to

⁵ No distance has been imputed for these facilities because it could not be discerned which data were simply missing for the reason of being on site and those that represented real missing cases.

Table 4.5: Outreach Services

Percent distribution of currently married women age 15-49 who have access to mobile clinic services *

	Access to Mobile Clinic Services (%)	Total Number of Women
Country		
Uganda	17.1	5,136
Bangladesh	68.6	8,980
Philippines	18.2	8,961

* This question was only asked in these three surveys.

facilities, travel times are 10-15 minutes and most women walk to services.

Distances, and correspondingly travel times, are much greater in rural areas, ranging from 15 minutes in Indonesia to 90 minutes in Haiti and Zimbabwe. Note, however, that these are the travel times reported at the time of the SAM survey and may vary depending on the season. During the rainy season in many countries, travel time may increase substantially since roads can become impassable, particularly in rural areas, and for many of these communities the main means of access was via a seasonal road.

In three countries, Uganda, Benin and Zimbabwe, the majority of women walk to services, but in these and several other countries large percentages of women also rely on other means of transport which may include a bicycle or animal, cart or boat. Indonesia is the only country where the majority of women use motorised transport.

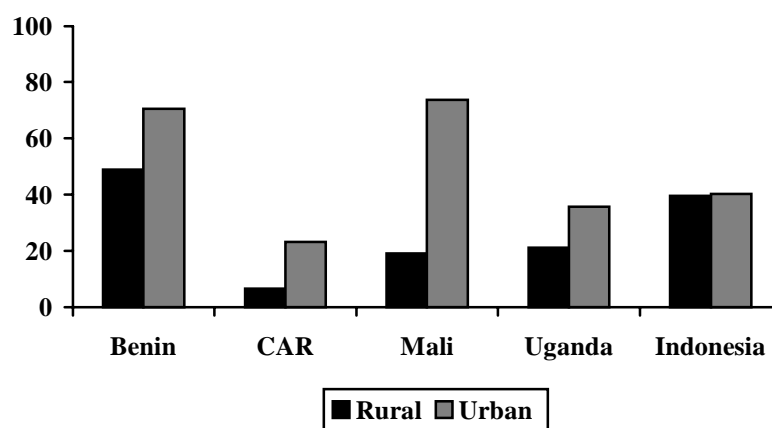
The travel time to obtain delivery services is similar to that reported for antenatal and other

services in all countries except Zimbabwe. This suggests that, at least in rural areas where facilities are more scarce, the same facilities are providing both ANC and delivery care. It is important to note, however, the very different circumstances that prevail around the time of delivery that may act to delay travel time. Most notably the timing of the onset of labour is unpredictable. It may occur at night when there is little transport available, and the time taken to travel any distance is increased because of concerns about safety and poor lighting on bad roads. Access by road may be seasonal, and drivers, because of cultural taboos, may refuse to transport labouring women. When transport is unavailable and women have to walk to seek care, the physical process of labour also adds to the travel time so that estimated times for reaching delivery care here are likely to be an underrepresentation of the real time require

4.5 Availability of outreach services

Health facilities in remote rural areas may have large catchment populations widely dispersed over many hundreds of square miles. In order to

Figure 4.2
Percent of currently married women aged 15-49 living in clusters where there is a Trained Midwife (TMW) by rural/urban residence



increase coverage, some may operate outreach services to reach rural women who have neither the time nor the economic resources to travel long distances. Table 4.5 shows the percentages of women who live in clusters with access to a mobile clinic service in the three countries – Bangladesh, the Philippines and Uganda – where a question about access to mobile services was asked. Bangladesh has achieved a high coverage of primary health care services because of the wide availability of mobile clinic services and more than two-thirds of women live in clusters where mobile clinics are held. Fewer than one in five women in Uganda and the Philippines has access to mobile services.

4.6 Availability of a skilled provider

Providing women with access to a skilled attendant at delivery is now considered the main strategy to reduce maternal mortality. Although there is still debate as to what constitutes “skilled,” there is consensus that professionals with obstetric training (nurses, midwives and doctors) are skilled providers (UNFPA et al., 1997). The SAM assessed the availability of

trained midwives (TMWs) but not other skilled providers in five out of the ten countries.⁶

Most women in Benin have access to a local midwife, but in all other countries only one-third to one-quarter of women have access to a midwife. In Benin and Mali more than 70% of urban women live in clusters where there is a TMW, whereas in Indonesia midwives are found equally in urban and rural areas (Figure 4.2).

Appendix Table 4.6 also shows the availability of traditional birth attendants (TBA). Since TBAs⁷ are more likely to work in communities with traditional lifestyles it is to be expected that rural communities will have access to a TBA. Most rural women live in communities where there is a TBA, and in five countries (Mali,

⁶ A TMW is a health professional who has successfully completed a course in midwifery and is able to give the necessary supervision, care, and advice to women during pregnancy, labour, and the post-partum period.

⁷ In the DHS surveys, a TBA is defined as a local woman who by profession or designation is the person to whom other women come to for assistance during childbirth.

Uganda, Zimbabwe, Indonesia and Haiti⁸) at least three-quarters of women have access to a TBA. By contrast, in most urban areas, only one-quarter of women live in communities where there is a TBA.⁹

⁸ The figure for Haiti includes data on both trained midwives and *matrones*.

⁹ Although more than 90% of women deliver with a TBA in Bangladesh, questions related to the availability of TBAs were not included.

5. The Availability and Use of Antenatal Care

Pregnant women need access to a wide range of services in the antenatal period. Good quality antenatal care should include services that monitor the progress of the pregnancy, screen and treat for obstetric, health or nutritional problems, provide preventive care such as tetanus toxoid immunisation and iron/folate supplementation as well as health education and counselling to help women prepare for a healthy and safe delivery (WHO, 1994; WHO, 1997a).

Despite considerable variation in the content and quality of antenatal care between countries, epidemiological studies tend to suggest an association between ANC and improved health outcome, although the strength of this association is much greater for newborn infants than for their mothers. As yet there is no consensus on the ideal ANC schedule, although a minimum of four visits, with the first beginning as early as possible in pregnancy, has been proposed¹⁰ (Knowles, Leighton and Stinson, 1997).

During DHS III, ANC data were collected from women on type of health care provider, the number of antenatal visits and gestational age at first visit. Using the SAM data, coverage of antenatal care services has been linked to data on the rural population of women to assess the influence of distance on the timing and frequency of visits for ANC. It is important to emphasise, however, that this comparative analysis can make no allowance for other important determinants such as the variation in quality of care or frequency and of timing of visits between countries

5.1 ANC coverage

ANC coverage varies widely between countries (Figure 5.1 and Appendix Table 5.1.) During their last pregnancy, more than three quarters of women attended for antenatal care with a skilled provider in Benin, Indonesia and the Philippines, and in Uganda and Zimbabwe more than 90%

¹⁰ The outcome of a large multi-centre trial to help resolve some of these issues is awaited (WHO 1999a).

did so. In Mali, less than half of all pregnant women received antenatal care, even when those who attended for care from health staff below the level of a doctor or nurse are included.

In urban areas, at least half of all pregnant women attend for antenatal care, and in eight countries 80% of women attend at least once. Coverage in rural areas is much lower.

Less than a quarter of rural women attended for antenatal care in Bangladesh compared to over 90% of women in Uganda and Zimbabwe. This disparity in rural/urban service provision is greatest in countries with the lowest overall coverage. In Bangladesh, Bolivia and Mali urban coverage is twice that of rural areas.

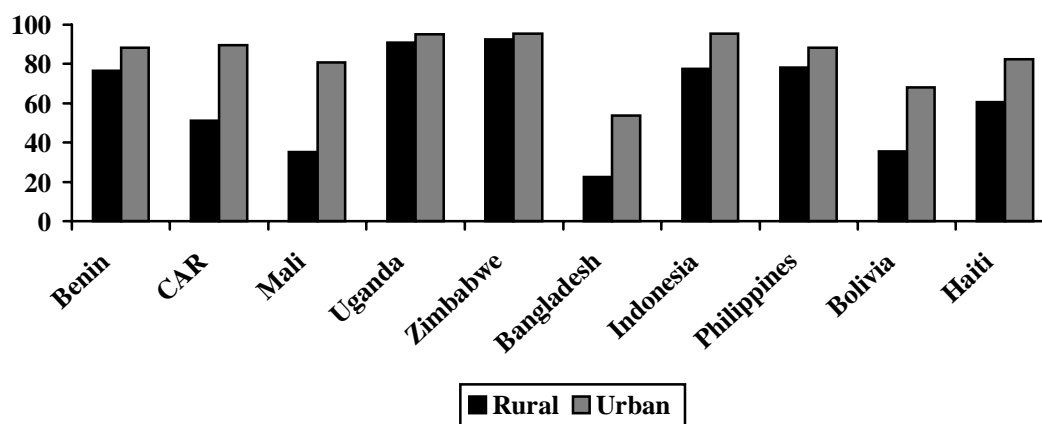
Women and babies who receive no antenatal care experience the worst perinatal outcomes. In urban Uganda, Zimbabwe and Indonesia, antenatal coverage is almost universal, whereas in Bangladesh coverage is limited to only half the urban population. Likewise, the proportion of rural women who receive no antenatal care is higher than in urban areas. Three-quarters of rural Bangladeshi women have no antenatal care compared to less than one in ten women in Uganda, Zimbabwe or the Philippines.

5.2 ANC: the provider

Patterns of care, as reflected in the type of health provider, vary widely between countries and regions. As Appendix Table 5.2 shows, in Africa and Indonesia, ANC is a midwifery-based service. Midwives provide the majority of care in every country except Mali where ANC is provided by midwives and lower-level health workers (in this case auxiliary midwives and *matrones*) equally.

Doctors provide at least half of all ANC in Bangladesh, Haiti, Bolivia and the Philippines. In urban settings a much higher proportion of ANC is doctor-based. This is most evident in Bolivia where antenatal care is provided almost exclusively by doctors. Since in most countries

Figure 5.1
Percentage of all births 3-5 years before the survey for whom
women report receiving antenatal care from a skilled provider by
rural/urban residence.



doctors are urban-based and the majority of the female population live in rural areas, it is perhaps unsurprising that the lowest overall ANC coverage is in the countries where doctors are responsible for the majority of antenatal service provision.

Traditional birth attendants (TBAs) provide a significant proportion of antenatal care only in the Philippines and CAR.

5.3 The influence of distance on the timing and frequency of ANC

Appendix Tables 5.2 and 5.3 show how distance to a health facility is associated with the frequency and timing of ANC for *rural* women. Appendix Table 5.2 shows where women live in relation to when they first attended for ANC. In all countries, women who live nearer to a health facility are more likely to attend for ANC earlier in their pregnancy compared with those who live further away. Women living further away are more likely to attend ANC later or not at all. This is most clearly seen in the Francophone countries and Indonesia.

In Benin, the median distance to a health facility for women who attend ANC in the first six months is 3.7 km, compared to 5.6 km for women who attend after this time and 7 km for women who have no antenatal care. In Uganda and particularly Zimbabwe, where almost all women attend for ANC, this differential, although present, is very small.

Appendix Table 5.3 shows that distance also has an influence on the number of ANC visits. In most countries, women who attend for ANC live closer to the health facility than those who do not attend and women who attend most often live the nearest. The number of visits is inversely associated with the median distance from the health facility. For example, in Benin, women who attend four or more times on average live 3 km from the nearest health facility. Women who attend for 1-3 visits live on average 5 km from a facility, and women who do not attend at all live 7 km away.

6. The Availability and Use of Delivery Care

Providing women with appropriate care at the time of delivery is the most crucial component of any maternal health service since it is around this time or shortly afterwards that the majority of maternal and neonatal deaths occur (UNICEF, 1999). Estimates suggest that up to 40% of all women may develop some type of complication requiring special help during delivery, and in 15% of cases these complications may be severe enough to warrant operative delivery (UNFPA et al., 1997; WHO, 1999b). Increasing the proportion of deliveries that take place with a skilled attendant has therefore become the primary focus for international programmes aimed at reducing maternal and newborn mortality and morbidity.¹¹

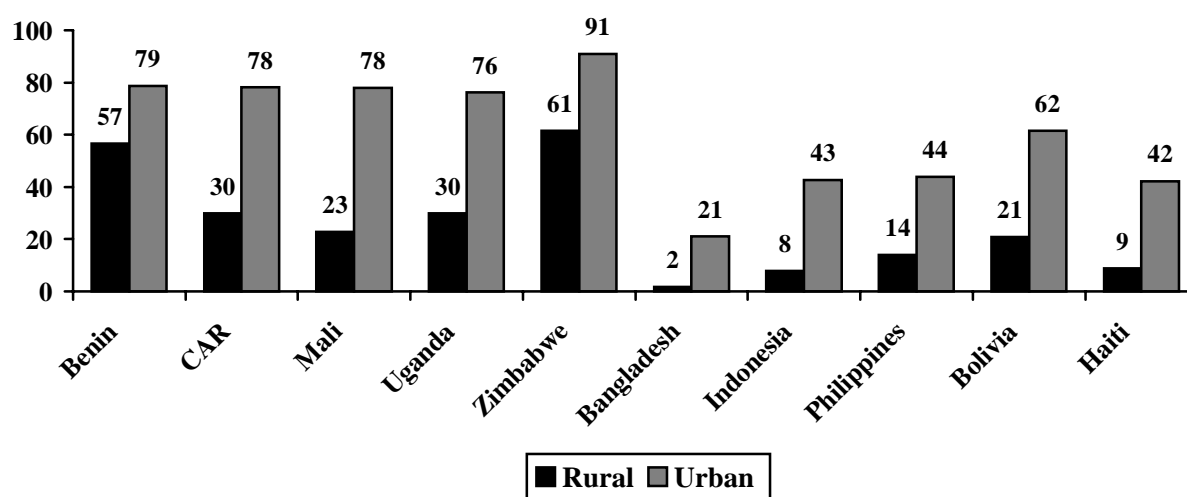
The DHS III surveys collected data on recent births according to the place and type of health

care provider present at delivery. Coverage of delivery care from the DHS women's questionnaire was linked to the SAM data to assess the influence of distance on the choice of health care provider and place of delivery.

6.1 Place of delivery

Appendix Table 6.1 and Figure 6.1 show where women deliver according to urban/rural residence. In most countries the majority of births occur at home, but there are widespread differences between countries and regions. In Haiti, Indonesia and Bangladesh at least 80% of deliveries take place at home, whereas in Benin and Zimbabwe most births take place in a health facility.

Figure 6.1
Percentage of all births delivered in a health facility by
Urban/Rural residence



¹¹ A skilled attendant, as defined by WHO, is a skilled midwife, nurse, nurse/midwife or doctor who has completed a set course of study and is registered or legally licensed. A skilled attendant should be able to manage normal deliveries, prevent iatrogenic complications, and manage or refer complications in a timely manner (UNFPA et al., 1997).

Overall, deliveries in the five African countries are more likely to take place at a health facility than in the three Asian countries. This is particularly evident in urban areas. Three-quarters of urban African women deliver in a health facility compared to approximately half the urban women in the three Asian countries and Haiti. In Bangladesh delivery in a health facility is uncommon, even in urban areas.

Most facility deliveries occur in hospital in both rural and urban areas, except in Benin where the majority take place in health centres and in Mali where most deliveries occur in facilities below the level of a health centre.

Hospital births, as a proportion of all facility births, are more common in urban areas. In Benin, CAR and Zimbabwe there are also significant numbers of urban deliveries taking place in health centres, and in Mali two-fifths of urban births occur in facilities below the health centre level.

In rural areas, hospital births likewise account for the greatest proportion of deliveries in facilities, although overall numbers are much less.

One-third of rural deliveries take place in hospitals in Zimbabwe but are uncommon in rural areas in all other countries (Appendix Table 6.3c.)

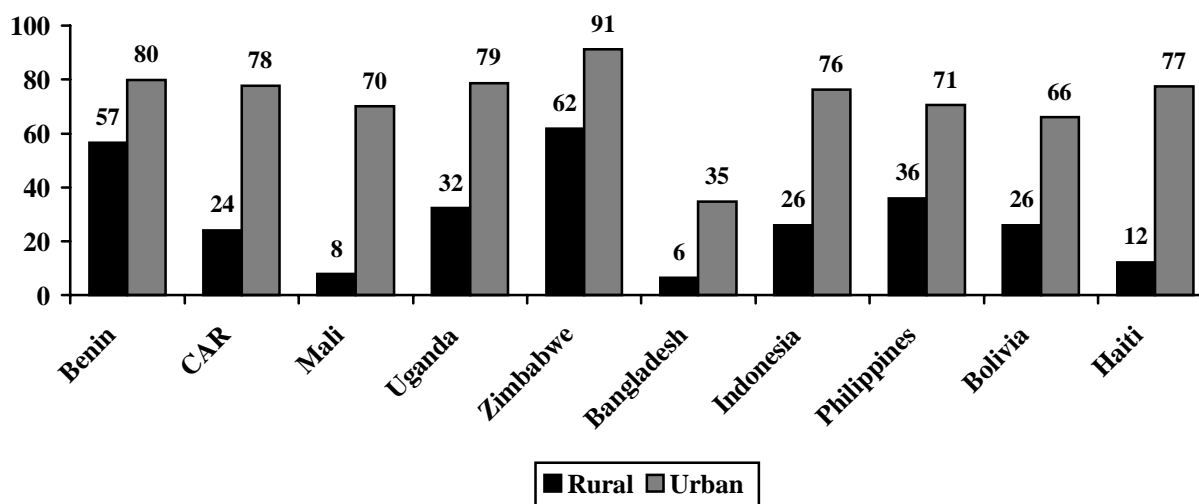
6.2 Delivery attendant

There are also widespread differences across countries in the type of attendant present at delivery, particularly between urban and rural areas. A skilled attendant, is present at the majority of deliveries in only three countries, Benin Zimbabwe and the Philippines, and in Bangladesh fewer than 10% of all births take place under the supervision of a skilled attendant.

As Figure 6.2 shows, at least two-thirds of urban women deliver with a skilled attendant in all countries except Bangladesh. Most rural deliveries, by contrast, take place in the absence of skilled care in all countries, apart from Benin and Zimbabwe.

Of the countries represented here, TBAs attend less than one-fifth of the deliveries in African countries and up to a half of all deliveries in the three Asian countries.

Figure 6.2
Percent of all births 3-5 years preceding the survey with a skilled attendant at delivery by urban/rural residence.



In countries where TBAs are less common, more women deliver alone. In Mali and Uganda up to 12% of all women deliver alone and in Bolivia a family member may be the only other person present in up to 40% of deliveries.

Appendix Tables 6.3a-c summarise where women in these ten countries gave birth in the 3-5 years preceding the survey, stratified by the type of attendant at delivery.

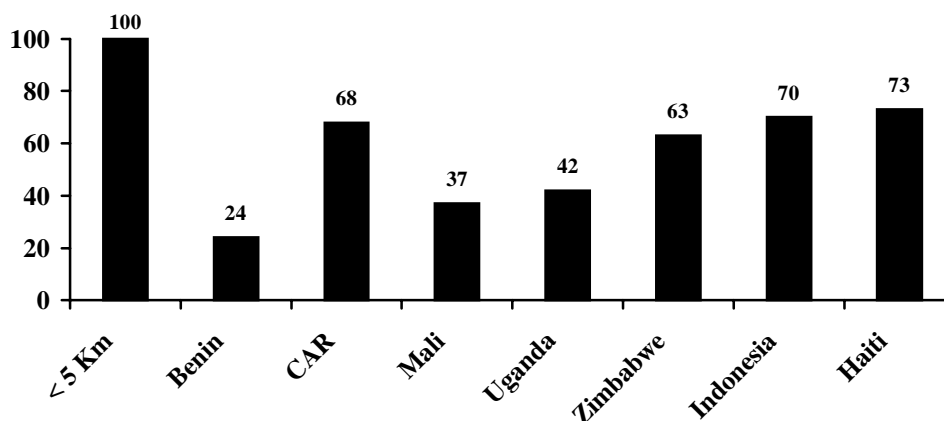
For seven out of the ten countries, the proportion of deliveries with a skilled attendant is very similar to the proportion of deliveries that take place in a health facility, except in Indonesia and the Philippines where domiciliary services are available and up to a quarter of the of the home births are assisted by a midwife. These domiciliary delivery services are uncommon in other countries. In Haiti the apparently high proportion of deliveries with a skilled attendant is an artifact, as the category of “matrones” (or trained traditional birth attendants) was combined with the category of skilled midwife in the original questionnaire.

Midwives, nurses or nurse-midwives conduct the majority of 'skilled attendant' deliveries in African countries and Indonesia. In Bolivia and Haiti, practically all deliveries are attended by doctors, and in the Philippines and Bangladesh doctors are responsible for half the skilled attendant births.

Patterns of care vary from country to country, but some broad regional patterns of service delivery emerge showing that, in general, urban deliveries are more likely to take place in hospitals and that a greater proportion are attended by doctors. In Francophone Africa attended deliveries are conducted by nurse-midwives in hospitals and health centres and by midwives in health centres in rural areas. In Uganda and Zimbabwe, whilst midwives conduct the majority of deliveries, even in rural areas most deliveries occur in hospitals.

In Bangladesh, Bolivia and the Philippines skilled attendants are mainly doctors working out of hospitals even in rural areas. Few health facility deliveries in these countries take place below hospital level.

Figure 6.3
Likelihood of delivering at a health facility: Odds ratios of delivering at a health facility for women living beyond 5 km compared to women living within a 5 km radius of a facility.



6.3 The influence of distance and time on delivery choices

Appendix Table 6.4 shows how the proportion of rural births taking place at a health facility is influenced by the proximity to the nearest delivery facility. In every country, women who live nearer to a health facility are more likely to deliver at a health facility. The proportion of births that take place at a health facility is higher for women who live closer to the facility, and the median distance that women live from a facility is shorter for those delivering at a facility than for those delivering elsewhere. In Benin, for example, women who do not deliver at a health facility live twice as far away as those who do.

The degree to which distance influences care seeking is shown in Figure 6.3. Here the odds ratio of delivering at a health facility, after allowing for the effect of education (used as a proxy for socio-economic status) is shown graphically. Women with some degree of education are between 1.5 and 4.5 times more likely to deliver at a facility than women with no education. However, proximity to services is also a strong and independent determinant of services use. In every country, women who live further than 5 km from a facility are between 25% and 75% less likely to deliver at a facility than those who live within 5 km.

The association between proximity and use was also investigated by exploring whether proximity to services was associated with delivery with a skilled provider. Since most deliveries with skilled attendants take place in health facilities and distance to the nearest delivery provider was not asked in the SAM, distance and time to the nearest delivery facility were used to explore the association between proximity and delivery with a skilled attendant. There is a consistent association between use of a skilled attendant at birth and proximity to services. Pregnant women who live nearer health facilities, both in terms of distance (Appendix Table 6.5) and time (Appendix Table 6.6), are more likely to deliver with a skilled attendant than women who live further away. Even in Indonesia, where the situation is complicated by the high proportion of midwife-attended home births, the median distance to the

health facility providing delivery care is significantly lower for women who deliver with a skilled attendant than without (1 km vs. 3.7 km), as is the median travel time (20 minutes vs. 46 minutes).

These effects persist in a multivariate analysis. After controlling for education, women who live more than an hour from a facility are between 30% and 65% less likely to deliver with a skilled attendant at a facility than women who live less than an hour away (See Appendix table M2).

7. Emergency Care

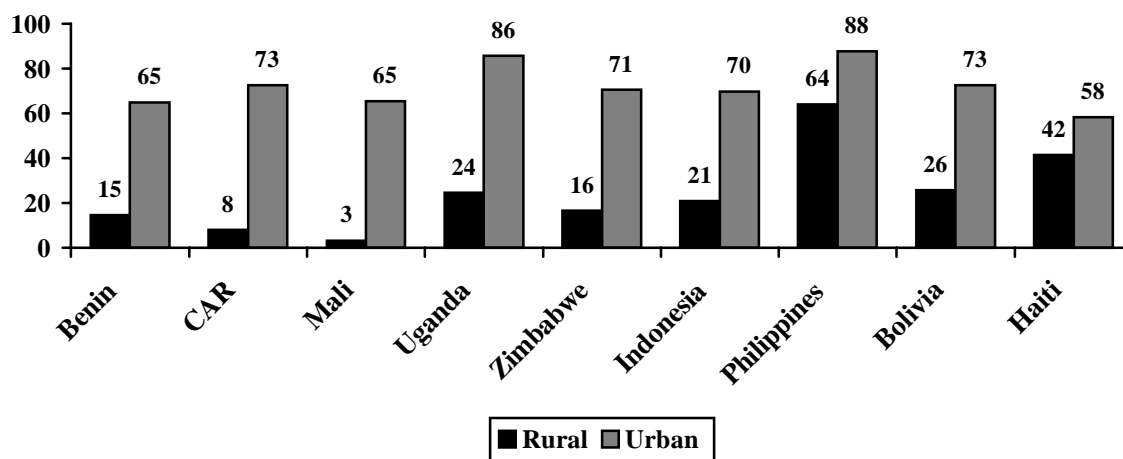
If deaths from pregnancy complications are to be averted, services need to be available as close to women as possible in order to provide rapid access to emergency care. Postpartum haemorrhage, which is responsible for more than a quarter of all maternal deaths, may kill within the space of a few hours unless appropriate care is available (UNICEF/WHO/UNFPA, 1997).

Two indicators to monitor women's access to services that have gained widespread acceptance, but have yet to be implemented on a large scale, are the number of facilities with functioning basic essential obstetric care (BEOC) and comprehensive essential obstetric care (CEOC) per 500,000 population. Although these indicators provide an important assessment of the actual functioning of services, both require

special surveys that are costly to perform, and as yet few countries have carried out these assessments¹² (UNICEF / WHO / UNFPA, 1997). Moreover, these indicators are service ratios that make no allowance for variations in population density and which may disguise widespread inequity in service provision between populations. Since most facilities that meet these criteria tend to be in urban areas, the use of these two indicators as *comparative* measure of services access is limited.

An alternative approach, as proposed by the WHO facility survey working group, is to measure the percentage of the population that lives within one hour's travel time of a health facility offering EOC (WHO, 1999a). Since the SAM relies only on community self report, the

Figure 7.1
Percent of currently married women aged 15-49 who live within 10 km of a hospital by rural/urban residence.



¹² Many district studies carried out by WHO suggest that few facilities, even at hospital level, are able to meet these criteria, and only a minority of women has access to either Basic Essential Obstetric Care (BEOC) or Comprehensive Obstetric Care (CEOC.) Data emerging from the first national level study in Kenya confirm these findings. (Kenya Services Provision Assessment, in draft.)

data that are collected are insufficient to categorise facilities as providing services according to whether they meet EOC criteria. However, since facilities that provide EOC will typically be hospitals, which should be able to perform at least some of the EOC functions, the SAM can provide an estimate of the proportion of women who have access to a hospital as a proxy for a woman's access to emergency EOC. Appendix Tables 7.1 and 7.2, respectively, show the percentage of women who live within a 10 km radius of a hospital and within one hour's travel time of a hospital.

In the Philippines, three-quarters of the married female population live within a radius of 10 km of a hospital, compared to approximately half the married female population in Bolivia and Haiti and less than one-third of married women in all the remaining countries (Appendix Table 7.1.)

Although access to care is much better in urban than rural areas (Figure 7.1), between 10 and 40% of urban women, nevertheless, live more than 10 km from a hospital. By contrast, only a quarter of rural women in eight countries have access to a hospital within 10 km. In Mali where access to care is worst, less than 5% of rural women live within 10 km of a hospital.¹³ Although the proportions of women who live within one hour of a hospital are marginally higher than those who live within 10 km, the fact remains that for many women in the countries included in this report there are effectively few emergency services available.

¹³ In Appendix Tables 7.1 and 7.2 there are substantial proportions of women who live in clusters where the distance to the nearest hospital was not recorded. Since key informants were chosen for their knowledge of the community, it can reasonably be assumed that the missing data most likely represent women living in communities where the key informant was unaware of the nearest hospital because it was a long distance away, beyond the 10 km radius.

8. Family Planning Services

In the developed world, where one in 1800 women dies of an obstetric cause, pregnancy is rarely a life threatening condition. By contrast, in some developing countries such as Ethiopia or Afghanistan up to one in ten women faces this risk. In such circumstances, family planning services play a key role in both reducing maternal mortality and improving maternal health, preventing perhaps as many as one in four maternal deaths (USAID, 1999). First, by reducing total fertility, family planning services lessen the lifetime risks of women developing pregnancy related complications. Secondly, by preventing unwanted pregnancies, total numbers of unsafe abortions are reduced. In many countries where access to safe abortion is restricted or illegal, unsafe abortion is the most common cause of maternal mortality (UNFPA, 1997).

DHS surveys collect information on women's knowledge and use of contraception, and these data have been linked to data collected in the SAM to examine the influence of distance on use of contraceptive services. The SAM did not collect data in any consistent way on the type of family planning services available at each facility.

8.1 Use of contraception¹⁴

DHS surveys collect data on modern, traditional and folk contraceptive methods. Use of any method of contraception varies across countries, with women using a variety of traditional and modern methods. Although in recent years there has been a substantial rise in the proportion of women using contraception in several of the countries included in this report, the overall percentage of married women using contraception remains small in many countries, from 6.7% to 16.4% in four African countries and between 40% and 54.7% in the remaining countries (Figure 8.1.) Indonesia is the only country where the

majority of currently married women are using any form of contraception.

Apart from Zimbabwe, where almost half the married female population report using contraception, rates of contraceptive use are much higher in the non-African countries. In these countries, modern methods account for the greatest proportion of use, except in Bolivia, where traditional methods, used by a quarter of the population, are the most popular method. Traditional methods are also the contraceptive method of choice in Benin, CAR and Uganda. By comparison, modern methods of contraception are almost exclusively used in Indonesia, and in Mali few women use contraception of any type.

The differentials between the proportions of women using contraception in rural compared to urban areas are relatively low when compared to the differentials in service utilisation for delivery care. See Appendix Table 6.1. The greater availability of contraceptives through community-based distributors (CBDs) in Bangladesh, Indonesia and the Philippines is likely to be one reason to account for this.

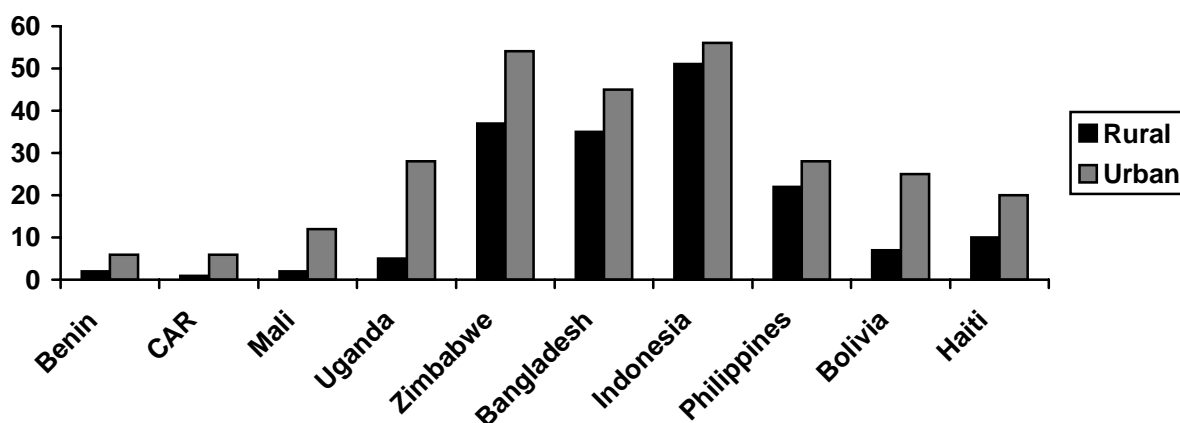
8.2 Use of a modern method of contraception

The association between use of a modern method of contraception and distance to the nearest facility providing family planning services is shown in Appendix Table 8.2. Although smaller percentages of women overall use a modern method compared to the previous tables of services use, antenatal and delivery care, there is still a consistent association across countries between the proportion of women using a modern method of contraception and proximity to a health facility. This association is seen in both the percentage distribution of women using a modern method, which is higher for women living closer to a facility, and in the median distances from the facility, which are shorter for women using contraception.

¹⁴ Data on the availability of various contraceptive methods were collected in only two out of the ten countries and was therefore not included in this report.

This association is not seen in Indonesia and Zimbabwe. Nevertheless, these effects persist in a multivariate analysis controlling for the effects of education (Appendix Table M1). Even though education is a very strong determinant of use – women with some education are between two and four and half times more likely to use contraception than women without education – a persistent but weaker effect of proximity on contraceptive use is still evident. Women who live further than 5 km from a facility providing contraception are on average 30% less likely to use contraception than those who live within 5 km (range 5-60%). This association is weakest in Indonesia and strongest in the Francophone countries and Bolivia.

Figure 8.1
Percentage of currently married women aged 15-49 using a modern method of contraception by urban/rural residence

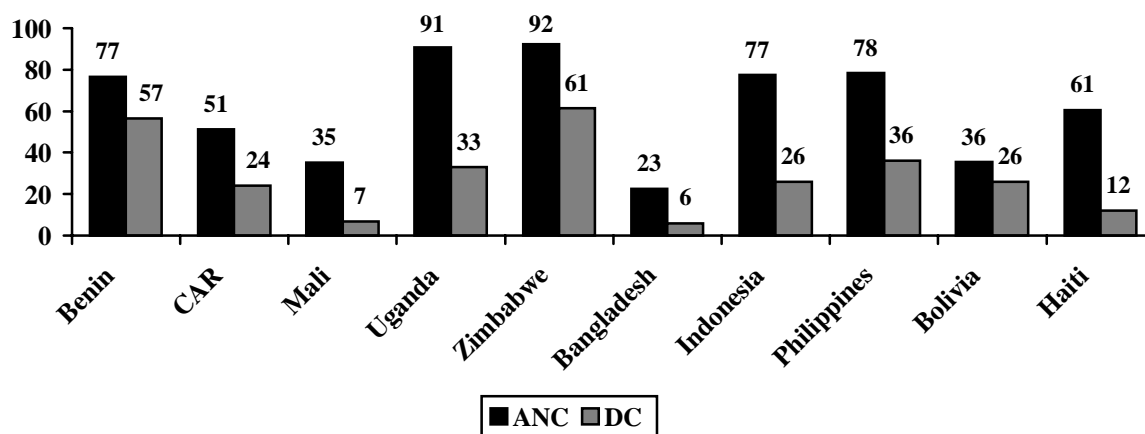


9. Conclusions

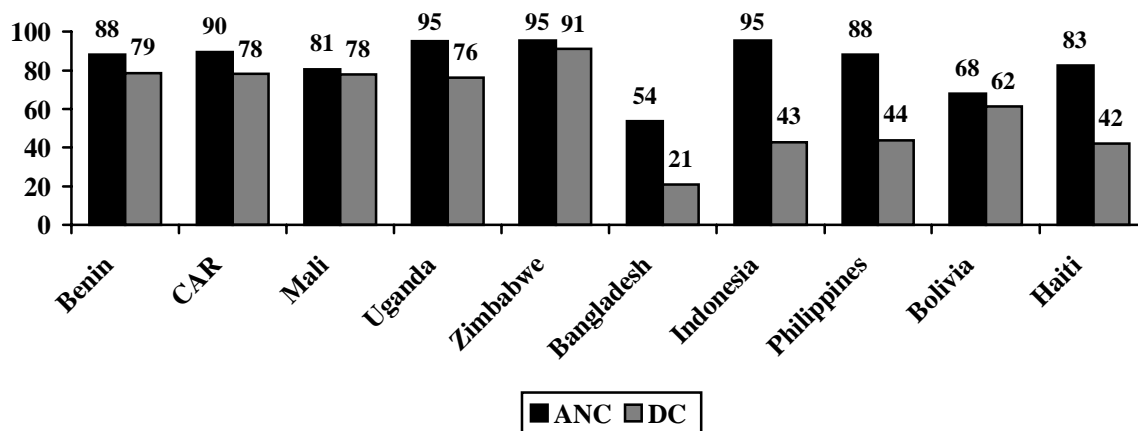
This report has compared the main findings on health services availability in ten countries carrying out the DHS Services Availability Modules between 1993 and 1996 and some of the corresponding data on health services utilisation taken from the DHS surveys during the same period. The report shows that in most countries the majority of women attend for ANC, that a minority of women deliver with a skilled atten-

dant, and that contraceptive practice varies widely between countries. Considered in isolation, these findings are unremarkable. The data have been previously published in individual country reports and are in keeping with many other sources of information on maternal health coverage (UNFPA et al., 1997; WHO, 1997a).

Figure 9.1
Percentage of all births whose mothers attended at least one ANC visit
and who delivered with a skilled attendant for RURAL areas



Percentage of all births whose mothers attended at least one ANC visit
and who delivered with a skilled attendant for URBAN areas



The strength of a comparative report, however, is that it identifies patterns and themes between countries, identifying common areas of need. In particular, this report reveals how pregnant women lack access to services at every stage of their pregnancy and it identifies marked disparities between urban and rural areas, differentials that are obscured when only national estimates are considered. In every country and in every type of service considered here, access is far greater in urban areas; urban women live nearer services, have better access to emergency care and have a much greater choice of service provider than their rural counterparts.

Whilst these findings are to be expected, they are rarely quantified and rarely used for targeting programme interventions. Twice as many urban women, for example, live within 5 km of any facility and two to three times as many urban women live within 10 km of a hospital or 5 km of a delivery facility. In Mali, where over a third of the rural population live beyond 15 km from the nearest delivery facility, four times as many urban women live within 5 km of a delivery facility as rural women. Indeed, in terms of services availability, urban populations in different countries are more alike than urban and rural areas within the same country.

More importantly, the report also shows that proximity to health services is consistently associated with greater use in every type of service considered: antenatal care, delivery care and family planning. Rural women who live nearer health services are not only more likely to seek antenatal care more frequently and earlier in the pregnancy, but are also more likely to deliver at a health facility, more likely to use a skilled attendant and more likely to use a modern method of contraception.

Adding further weight to the evidence that proximity to health services has an association with women's care seeking behaviour is the fact that distance and time both appear to exert a variable dose-response effect which is evident in both the bivariate and multivariate analyses in many of the tables. For example, Ugandan women living within 5 km of a facility are twice as likely to deliver at a facility than women liv-

ing between 5 and 14 km from one, and are four times more likely than women living more than 15 km from a facility.

Of considerable interest is the fact that proximity to services appears to be a much greater disincentive to women seeking care around the time of delivery than at other times during pregnancy. The odds ratios from multivariate analysis for women living beyond 5 km compared with those for women living within 5 km of a health facility are consistently lower for delivery with a skilled attendant than for ANC with a skilled attendant (not shown). It is generally well recognised that the proportions of women attending for antenatal care are far higher than those seeking care with a skilled attendant. In Figure 9.1, the proportions of women attending for antenatal care and delivery care show wider variation in rural than urban areas, perhaps also suggesting that services availability might account for some of these differences.

Geographical proximity to services is only one of the many determinants of health services utilisation and detailed analysis of other economic, social and cultural determinants are beyond the scope of this report. Moreover, this type of comparative analysis can make no allowance for differences between countries in the quality of care, availability of appropriately skilled staff, health equipment, supplies and medicines, clinic opening times and many other factors which are in themselves very powerful determinants of health services use. Because of the implications of the findings, a limited multivariate analysis was conducted to examine the role of education as a potential confounder. Education is known to be an important direct determinant of services use as well as an indirect determinant because of its association with socio-economic status. The results of this analysis shown in Tables M1-M3 clearly demonstrate that education has a powerful influence on services utilisation, but that geographical proximity also has a very strong and independent effect. Although confounding by other influences cannot be precluded without further detailed analyses, the persistence of the association after controlling for education, the incremental effect of proximity and use of services in both bivariate

and multivariate analyses and the consistency of the association across countries and type of services delivered, together suggest that proximity is a strong determinant of use.

9.1 Implications for current international policies and programmes

The findings of the report have a number of policy implications. First, low services availability is still a major barrier to care in many countries, even in those countries whose national estimates suggest relatively high services coverage. Many rural women live in areas where the physical terrain and the distances involved when seeking care mean that services are effectively unavailable. Although improving services quality is an important consideration, for these women, the priority must be to increase services coverage.

Secondly, in order to improve programme management, countries and agencies reporting health services data should be encouraged to stratify their indicators by appropriate differentials. This report on geographical proximity considered only stratification by urban/rural residence in any detail, but further analysis would most likely reveal other disparities between subgroups as was shown in the utilisation data for educated and non-educated women. Stratification would have two principle purposes. Programmes could target scarce resources to those most in need and the stratification would permit some monitoring of whether health programmes have an impact on increasing or decreasing equity between subgroups. Unless this is done, programmes designed to improve access may appear to be achieving progress, but, in fact, may only be serving to increase inequity. For example, a programme aimed at increasing delivery with a skilled attendant may appear to increase access when national data only are considered but in fact achieve its effect by raising provision in only the more programmatically accessible urban areas.

The difficulties of assessing countries' progress towards the benchmarks established at ICPD +5 illustrate this problem. The conference set

benchmarks of 80% of births attended by a skilled attendant by 2015 and 60% of births in countries with high maternal mortality. Interim targets for these high mortality countries are for at least 40% of births with a skilled attendant by 2005, 50% by 2010 and 60% by 2015 (WHO, 1999b).

When national aggregates alone are considered, of the countries in this report, six out of the ten have already achieved their 2005 target of 40% of deliveries with a skilled attendant and nine out of ten have achieved their target if urban populations alone are considered. The picture is very different for rural populations, and only two countries, Benin and Zimbabwe, have already exceeded their target. Many others require large percentage increases over present levels, and Mali and Bangladesh require more than a sixfold increase.

Not only are these very large increases, but women who deliver currently with a skilled attendant are more likely to represent those who already have the most ready access to services. Poor infrastructure, particularly poor roads and lack of transport in many of these communities, is a major barrier to care, and increases in the numbers of attended births will become incrementally more difficult as progress is made. By far the greatest obstacles are faced in Mali where only 7% of rural women currently deliver with a skilled attendant, only 7% have access to an all-weather road and less than a quarter live within 5 km of a facility providing delivery care.

Taken in isolation, these data alone appear to suggest that ICPD benchmarks are already unattainable for rural populations in many countries. If national data are disaggregated in other ways, similar problems for other subgroups of the population are likely to be revealed. Programmes must have available accurate baseline data in order to set realistic targets. Although an ambitious goal may be important for advocacy at the outset of any programme, as time progresses such a goal is in danger of becoming at best a noble aspiration and at worst an ignored irrelevance.

9.2 Implications for monitoring and evaluation: The role of the SAM in linking population and survey data

Two conceptually different approaches have been used to date by DHS to obtain information linking health services and population-based data. The advantage of the SAM was that it provided a unique, relatively cheap and methodologically simple method for determining a population-based estimate of the geographical proximity of services to the population. Its disadvantage, however, was that it could only provide limited information on the types of services available. Whilst it provided information about the availability of health services to a representative sample of the population, it did not provide any information representative of health facilities. The need for more comprehensive health services data for programme planning purposes led to it eventually being superseded by another type of survey, the Services Provision Assessment (SPA).

The SPA uses a facility-based sample to provide detailed information about the quality and performance of a nationally representative sample of health facilities, allowing, for example, assessments to be made of the actual functioning of services such as the proportion of facilities that are able to provide Basic or Comprehensive Essential Obstetric Care. The disadvantage of the method, however, is that it is methodologically more complex, more expensive and does not provide data that are representative of a population of women. Although the SPA has theoretically superseded the SAM, it is clear that the two surveys collect very different types of information. The SAM provides data on access and availability of health services to a representative sample of *women*, whilst the SPA provides data on the availability, quality and use of health services in a representative sample of health facilities. Both types of survey serve fundamentally different purposes and the data are complementary rather than mutually exclusive.

As programmes to promote the availability and quality of health services increase in line with the goals outlined in ICPD+5, there is likely to

be greater demand for data to evaluate health systems performance and increased interest in exploring the relationship between health systems performance and health outcome. One approach to linking, as has been attempted in the SPA in Kenya, is to link health facilities sampled from a SPA to the DHS survey population based on geographical proximity. In Kenya, GPS units were used to collect latitude and longitude data for both the surveyed health facilities and DHS clusters. In this way information was obtained about the surveyed population in the vicinity of the surveyed facilities (Kenya Services Provision Assessment Report, in draft). Several other approaches for linking population and facility data have been proposed and tested, but all have inherent advantages and disadvantages and further research is continuing in this area.

One of the greatest challenges facing maternal health is the need to develop effective tools and methods for monitoring purposes. Improved information is vital for understanding the determinants of maternal and newborn health and for designing and testing effective interventions. The goal of ICPD and the Columbo consultation, to reduce maternal mortality by half within 20 years by increasing access to health services, has focussed our attention on providing women with better access to care as well as the need for developing tools and methods to monitor progress. Although geographical proximity is only one aspect of many determinants of services access, as this report has shown, it is clearly a very important determinant of both access and services use.

Few tools exist to measure services access. Despite the inherent assumptions and limitations of the method, the Services Availability Module is a cost effective approach for obtaining information about proximity to services in countries where DHS surveys are being implemented. In the context of the difficulties that monitoring maternal health presents and the clear need to increase services coverage, the potential contribution of the SAM for providing data on access to health services should be reassessed. Potential contributors to this discussion should be experts involved in the development of tools and

methods for monitoring maternal health as well as those experienced in the SAM methodology.

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11. Appendix A: Tables

Table 3.1a: Type of settlement

Percent distribution of ALL currently married women aged 15-49 by characteristics of their communities and households.

	Benin	CAR	Mali	Uganda	Zimbabwe	Bangladesh	Indonesia	Philippines	Bolivia	Haiti
<u>Type of Settlement</u>										
Capital City	8.5	18.1	10.2	5.0	23.8 ^b	8.1	8.4	26.7	45.5	24.3
Other cities	26.3	23.0	14.6	14.1	5.6 ^c	8.6	21.7	20.4	25.2	12.9
Rural	65.2	58.6 ^a	75.2	80.9	70.6	83.3	69.9	52.7	29.3	62.8
Missing	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	4,198	4,083	8,222	5,136	3,788	8,980	26,186	8,961	5,334	3,113

Notes:

^a Village, ^b Main town, ^c Other urban,

* Low Level Health facility refers to those facilities below a hospital or health centre.

Table 3.1b: Means of access and distance to nearest town

Percent distribution of currently married RURAL women aged 15-49 by characteristics of their communities and households.

	Benin	CAR	Mali	Uganda	Zimbabwe	Bangladesh	Indonesia	Philippines	Bolivia	Haiti
<u>Main means of access:</u>										
All weather road	63.8	5.1	7.1	50.7	91.0	N/A	N/A	63.7	58.5	12.1
Seasonal road	30.9	61.0	86.1	26.8	7.4	N/A	N/A	14.1	24.6	81.0
River/path/train	3.1	27.3	6.8	13.0	1.6	N/A	N/A	4.4	5.6	5.4
Missing	2.2	6.6	0.0	9.5	0.0	N/A	N/A	17.8	11.3	1.6
<u>Distance to nearest town with</u>										
<u>20,000 or more (in km):</u>										
0-10	28.2	14.4	26.1	34.2	2.9	86.5	N/A	68.3	25.8	48.9
11-30	43.7	24.8	40.7	30.2	9.3	13.5	N/A	12.7	25.2	34.3
31-50	20.9	24.8	13.9	10.5	10.7	0.0	N/A	1.1	12.0	2.3
51-100	4.3	22.5	16.0	6.5	39.1	0.0	N/A	0.1	15.7	4.4
100 or more	0.0	7.0	3.2	0.6	37.2	0.0	N/A	0.0	8.9	0.0
Missing	2.9	6.6	0.0	18.0	0.8	0.0	N/A	17.8	12.5	10.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	2,739	2,562	6,044	4,523	2,674	7,967	18,595	4,323	2,177	1,954

Notes:

Questions on the main means of access were not asked in urban areas, hence only data relating to women in rural clusters are presented.

N/A: Not Asked.

Table 4.2 Distance to the Nearest Health Facility

Percent distribution of currently married women aged 15-49 by distance to the nearest health facility (excluding pharmacies).

	Benin	CAR	Mali	Uganda	Zimbabwe	Bangladesh	Indonesia	Bolivia	Haiti
Rural									
< 5 km	48.1	23.3	23.9	51.0	28.0	73.3	46.1	40.6	41.7
5 - 14 km	37.9	10.6	39.7	39.7	51.5	8.1	37.7	33.4	32.5
15 + km	13.1	23.5	35.1	7.3	20.5	1.0	13.6	21.9	22.2
Median	5.2	7.8	10.3	4.8	7.7	3.1	5.4	5.7	5.5
Total	2,739	2,562	6,044	4,523	2,674	7,967	18,595	2,177	1,954
Urban									
< 5 km	89.4	93.0	97.1	99.2	94.8	91.7	81.6	98.3	62.7
5 - 14 km	7.9	0.6	1.0	0.0	5.2	4.1	5.7	0.6	9.5
15 + km	2.0	0.0	2.0	0.0	0.0	0.0	4.9	0.0	9.9
Median	<1	<1	<1	<1	1.2	<1	1.6	<1	2.9
Total	1,459	1,521	2,178	613	1,114	1,013	7,591	3,157	1,159
Total									
< 5 km	62.4	49.3	43.1	56.7	47.6	75.3	56.4	74.7	49.5
5 - 14 km	27.5	6.9	29.4	35.0	37.9	7.7	28.4	14.0	24.0
15 + km	9.2	14.8	26.3	6.4	14.5	0.9	11.0	8.9	17.6
Median	1.9	1.4	6.6	4.3	5.3	1.9	3.9	<1	4.6
Total	4,198	4,083	8,222	5,136	3,788	8,980	26,186	5,334	3,113

Table 4.3: Distance to the nearest maternal health service

Percent distribution of currently married women aged 15-49 by distance to nearest facility providing antenatal care, delivery care and family planning services according to rural/urban residence

Distance	Benin			CAR			Mali			Uganda			Zimbabwe		
	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP
RURAL															
< 1 km.	26.2	25.3	26.9	14.7	15.2	17.1	14.3	14.3	12.1	9.3	8.7	13.6	6.9	6.4	7.8
1-4 km.	19.6	20.2	20.5	7.1	7.1	7.1	6.2	6.2	4.3	31.1	26.9	25.2	19.7	18.2	18.3
5-14 km.	40.2	40.5	35.5	8.9	8.9	7.9	36.8	37.7	31.2	44.2	44.3	35.0	50.8	51.7	51.3
15+ km.	13.1	13.1	16.2	24.4	22.7	25.3	37.6	36.7	36.2	13.4	17.4	21.1	22.6	23.7	22.7
DK/Missing	0.9	0.9	0.9	44.9	46.1	42.7	5.0	5.0	16.3	2.1	2.6	5.1	0.0	0.0	0.0
Median	5	5	5	10	10	10	12	11	13	5	6	5	8	8	8
URBAN															
< 1 km.	60.2	58.8	63.1	49.2	30.3	57.3	75.6	67.4	81.4	37.8	32.3	51.4	34.5	20.2	44.0
1-4 km.	25.4	26.1	25.8	40.5	46.4	35.7	20.2	27.7	11.3	59.2	65.6	45.8	50.0	51.4	44.7
5+ km.	13.8	14.4	8.8	3.3	8.5	0.6	3.2	3.0	3.3	2.2	1.4	0.8	12.8	26.1	10.5
DK/Missing	0.7	0.7	2.3	6.9	14.8	6.4	1.1	1.9	4.0	0.8	0.8	2.0	2.3	2.3	0.8
Median	<1	<1	<1	<1	2	<1	<1	<1	<1	1	1	<1	1	2	1
TOTAL															
< 1 km.	38.0	37.0	39.5	27.6	20.8	32.1	30.6	28.4	30.4	12.7	11.5	18.1	15.1	10.5	18.4
1-4 km.	21.6	22.3	22.3	19.5	21.7	17.8	9.9	11.9	6.1	34.5	31.6	27.7	28.6	27.9	26.0
5-15 km.	30.3	30.7	24.9	6.8	8.7	5.1	27.1	27.7	23.0	39.2	39.2	30.9	39.0	43.4	38.3
15+ km.	9.2	9.2	11.9	15.3	14.2	15.9	28.4	27.8	27.4	11.8	15.3	18.6	16.6	17.5	17.0
NS/missing	0.8	0.8	1.4	30.8	34.5	29.1	4.0	4.2	13.0	1.9	2.4	4.7	0.7	0.7	0.2
Median	3	3	3	2	2	1	7	7	8	4	4	3	6	7	5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	4198	4198	4198	4083	4083	4083	8222	8222	8222	5136	5136	5136	3788	3788	3788

ANC: Antenatal Care, DC: Deliver Care, FP: Family Planning, NS: No service
Missing data excluded from the calculation of the median

Table 4.3 (contd.): Distance to the nearest maternal health service

Percent distribution of currently married women aged 15-49 by distance to nearest facility providing antenatal care, delivery care and family planning services according to rural/urban residence

Distance	Bangladesh			Indonesia			Philippines			Bolivia			Haiti		
	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP
RURAL															
< 1 km.	N/A	N/A	N/A	11.9	8.9	14.1	N/A	N/A	N/A	N/A	N/A	12.7	0.0	0.0	N/A
1-4 km.	N/A	N/A	N/A	42.6	27.8	45.1	N/A	N/A	N/A	N/A	N/A	9.7	42.9	27.4	N/A
5-15 km.	N/A	N/A	N/A	35.9	35.2	32.9	N/A	N/A	N/A	N/A	N/A	27.6	35.0	28.0	N/A
15+ km.	N/A	N/A	N/A	7.5	15.2	6.6	N/A	N/A	N/A	N/A	N/A	23.8	13.3	25.5	N/A
NS/missing	N/A	N/A	N/A	2.2	12.9	1.4	N/A	N/A	N/A	N/A	N/A	26.2	8.8	19.2	N/A
Median	N/A	N/A	N/A	4	5	3	N/A	N/A	N/A	N/A	N/A	10	5	7	N/A
URBAN															
< 1 km.	N/A	N/A	N/A	43.9	24.8	62.5	N/A	N/A	N/A	N/A	N/A	75.5	18.9	9.2	N/A
1-4 km.	N/A	N/A	N/A	49.4	51.5	34.7	N/A	N/A	N/A	N/A	N/A	13.6	40.6	31.6	N/A
5+ km.	N/A	N/A	N/A	5.8	16.9	2.7	N/A	N/A	N/A	N/A	N/A	0.1	18.1	24.4	N/A
NS/missing	N/A	N/A	N/A	0.8	6.9	0.2	N/A	N/A	N/A	N/A	N/A	10.7	22.4	34.9	N/A
Median	N/A	N/A	N/A	1	1	0	N/A	N/A	N/A	N/A	N/A	0	3	3	N/A
TOTAL															
< 1 km.	N/A	N/A	N/A	21.2	13.5	28.1	N/A	N/A	N/A	N/A	N/A	49.9	7.0	3.4	N/A
1-4 km.	N/A	N/A	N/A	44.6	34.6	42.1	N/A	N/A	N/A	N/A	N/A	12.0	42.1	28.9	N/A
5-15 km.	N/A	N/A	N/A	27.1	29.6	24.1	N/A	N/A	N/A	N/A	N/A	11.3	26.1	24.6	N/A
15+ km.	N/A	N/A	N/A	5.4	11.1	4.7	N/A	N/A	N/A	N/A	N/A	9.7	10.9	18.0	N/A
NS/missing	N/A	N/A	N/A	1.8	11.2	1.1	N/A	N/A	N/A	N/A	N/A	17.1	13.9	25.0	N/A
Median	N/A	N/A	N/A	2	3	2	N/A	N/A	N/A	N/A	N/A	0	4	5	N/A
Total	N/A	N/A	N/A	100.0	100.0	100.0	N/A	N/A	N/A	N/A	N/A	100.0	100.0	100.0	N/A
N	N/A	N/A	N/A	26186	26186	26186	N/A	N/A	N/A	N/A	N/A	5334	3113	3113	N/A
ANC: Antenatal Care, DC: Deliver Care, FP: Family Planning, NS: No service, N/A: Not Asked Missing data excluded from the calculation of the median															

Table 4.4: Travel time and mode of transport to the nearest maternal health service

Percent distribution of currently married women age 15-49 by travel time (minutes) and mode of transportation to nearest facility providing antenatal care, delivery care, child immunisation and family planning services, according to rural-urban residence.

	Benin			CAR			Mali			Uganda			Zimbabwe		
	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP
RURAL															
< 30 min.	41.5	42.5	45.2	18.5	20.3	19.7	19.6	19.6	19.0	19.4	18.5	20.8	17.6	17.6	18.5
30-59 min.	21.6	20.3	22.1	10.4	7.9	10.4	18.7	19.5	14.9	19.3	18.6	16.6	17.3	16.9	16.6
1-2 hours	33.8	34.1	25.7	9.9	9.5	9.5	35.2	33.7	27.0	45.6	44.8	38.8	48.5	48.0	51.6
3+ hours	2.2	2.2	6.1	16.3	16.3	17.7	18.1	18.8	19.7	13.7	15.5	18.7	14.8	15.6	12.9
NS/missing	0.9	0.9	0.9	44.9	46.1	42.7	8.5	8.4	19.4	2.1	2.6	5.1	1.9	1.9	0.4
Median	30	30	30	45	45	45	60	60	60	60	60	60	60	90	75
Motorized	10.9	12.9	11.7	15.4	15.4	14.6	22.5	23.1	18.7	11.4	13.5	13.5	24.3	24.8	24.3
Walking	44.9	42.9	42.9	29.7	28.5	32.0	18.0	18.6	17.7	51.4	47.6	50.0	70.3	69.8	70.3
Other	43.3	43.3	44.6	7.6	7.6	8.2	53.6	52.4	46.4	34.9	35.9	30.8	5.4	5.4	5.4
NS/missing	0.9	0.9	0.9	47.4	48.6	45.1	5.9	5.9	17.2	2.3	3.0	5.7	0.0	0.0	0.0
URBAN															
< 30 min.	77.6	77.6	77.9	72.9	61.9	77.6	88.8	87.4	88.2	79.9	78.3	80.3	78.0	70.0	83.5
30-59 min.	12.2	12.2	13.4	16.9	17.5	12.2	5.1	5.0	5.4	17.5	19.1	13.7	16.9	22.4	12.9
1-2 hours	9.5	9.5	6.4	3.9	5.7	3.9	2.1	1.9	1.0	1.9	1.9	3.5	2.8	2.8	2.8
3+ hours	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	1.4	0.0	0.0	0.5	0.0	0.0	0.0
NS/missing	0.7	0.7	2.2	6.9	14.8	6.4	1.1	2.8	4.0	0.8	0.8	2.0	2.3	4.7	0.8
Median	15	15	11	15	20	15	10	10	10	10	10	10	10	15	10
Motorized	15.3	15.8	8.8	19.8	31.0	12.9	6.2	14.0	4.9	12.8	20.2	8.3	19.1	32.9	14.2
Walking	65.9	64.6	67.5	63.7	45.3	73.4	77.6	69.1	72.6	36.0	46.6	52.1	78.6	64.8	85.0
Other	18.2	19.0	21.5	8.8	8.8	7.4	14.0	13.7	17.3	50.4	32.5	37.3	0.0	0.0	0.0
NS/missing	0.7	0.7	2.2	7.8	14.8	6.4	2.3	3.1	5.2	0.8	0.8	2.3	2.3	2.3	0.8
TOTAL															
< 30 min.	54.0	54.7	56.6	38.8	35.8	41.3	37.9	37.6	37.4	26.6	25.6	27.9	35.4	33.1	37.6
30-59 min.	18.4	17.5	19.0	12.6	11.4	11.0	15.1	15.7	12.4	19.1	18.7	16.2	17.1	18.5	15.5
1-2 hours	25.4	25.6	19.0	7.7	8.1	7.4	26.4	25.3	20.1	40.3	39.7	34.6	35.0	34.7	37.3
3+ hours	1.4	1.4	4.0	10.2	10.2	11.1	14.1	14.6	14.9	12.1	13.6	16.5	10.4	11.0	9.1
NS/missing	0.8	0.8	1.4	30.8	34.5	29.1	6.5	6.9	15.3	1.9	2.4	4.7	2.0	2.7	0.5
Median	20	20	20	20	25	20	40	35	30	60	60	60	45	45	45
Motorized	12.4	13.9	10.7	17.0	21.2	14.0	18.2	20.7	15.1	11.6	14.3	12.9	22.8	27.2	21.3
Walking	52.2	50.4	51.4	42.3	34.7	47.4	33.8	32.0	32.3	49.6	47.5	50.2	72.8	68.3	74.6
Other	34.8	34.8	36.5	8.0	8.0	7.9	43.1	42.2	38.7	36.7	35.5	31.6	3.8	3.8	3.8
NS/missing	0.8	0.8	1.4	32.6	36.0	30.7	5.0	5.2	14.0	2.1	2.7	5.3	0.7	0.7	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	4,198	4,198	4,198	4,083	4,083	4,083	8,222	8,222	8,222	5,136	5,136	5,136	3,788	3,788	3,788

Table 4.4: (Contd.)

Percent distribution of currently married women aged 15-49 by travel time (minutes) and mode of transportation to nearest facility providing antenatal care, delivery care and family planning services according to rural-urban residence

	Bangladesh			Indonesia			Philippines			Bolivia			Haiti*		
	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP
RURAL															
< 30 min.	N/A	N/A	N/A	72.5	69.7	72.9	N/A	N/A	N/A	N/A	N/A	30.3	21.4	13.6	N/A
30-59 min.	N/A	N/A	N/A	16.7	18.1	16.7	N/A	N/A	N/A	N/A	N/A	10.9	3.7	3.1	N/A
1-2 hours	N/A	N/A	N/A	8.1	8.3	8.0	N/A	N/A	N/A	N/A	N/A	21.3	43.7	38.6	N/A
3+ hours				0.9	0.8	1.0						3.9	21.1	24.2	
NS/missing	N/A	N/A	N/A	1.7	3.1	1.4	N/A	N/A	N/A	N/A	N/A	33.7	10.1	20.5	N/A
Median	N/A	N/A	N/A	15	15	15	N/A	N/A	N/A	N/A	N/A	30	90	90	N/A
Motorized	N/A	N/A	N/A	61.4	62.0	61.4	N/A	N/A	N/A	N/A	N/A	25.9	15.6	17.5	N/A
Walking	N/A	N/A	N/A	21.4	19.2	21.6	N/A	N/A	N/A	N/A	N/A	33.7	0.0	0.0	N/A
Other	N/A	N/A	N/A	13.4	14.4	13.4	N/A	N/A	N/A	N/A	N/A	6.4	71.8	59.5	N/A
NS/missing	N/A	N/A	N/A	3.9	4.5	3.6	N/A	N/A	N/A	N/A	N/A	34.0	12.6	23.0	N/A
URBAN															
< 30 min.	N/A	N/A	N/A	93.6	92.4	96.0	N/A	N/A	N/A	N/A	N/A	86.9	55.2	40.3	N/A
30-59 min.	N/A	N/A	N/A	4.9	4.8	3.0	N/A	N/A	N/A	N/A	N/A	2.0	6.8	10.9	N/A
1-2 hours	N/A	N/A	N/A	0.3	1.3	0.3	N/A	N/A	N/A	N/A	N/A	0.0	9.9	9.8	N/A
3+ hours				0.0	0.0	0.0						0.0	3.9	2.4	
NS/missing	N/A	N/A	N/A	1.2	1.6	0.7	N/A	N/A	N/A	N/A	N/A	11.1	24.2	36.6	N/A
Median	N/A	N/A	N/A	10	10	10	N/A	N/A	N/A	N/A	N/A	10	15	20	N/A
Motorized	N/A	N/A	N/A	46.4	52.1	46.0	N/A	N/A	N/A	N/A	N/A	6.9	32.9	32.7	N/A
Walking	N/A	N/A	N/A	27.2	22.0	27.7	N/A	N/A	N/A	N/A	N/A	81.0	0.0	0.0	N/A
Other	N/A	N/A	N/A	24.1	23.5	24.1	N/A	N/A	N/A	N/A	N/A	1.0	43.3	30.3	N/A
NS/missing	N/A	N/A	N/A	2.4	2.4	2.2	N/A	N/A	N/A	N/A	N/A	11.1	23.8	37.0	N/A
TOTAL															
< 30 min.	N/A	N/A	N/A	78.6	76.3	79.6	N/A	N/A	N/A	N/A	N/A	63.8	34.0	23.6	N/A
30-59 min.	N/A	N/A	N/A	13.3	14.2	12.7	N/A	N/A	N/A	N/A	N/A	5.6	4.8	6.0	N/A
1-2 hours	N/A	N/A	N/A	5.9	6.3	5.8	N/A	N/A	N/A	N/A	N/A	8.7	31.1	27.9	N/A
3+ hours				0.6	0.6	0.7						1.6	14.7	16.1	
NS/missing	N/A	N/A	N/A	1.6	2.6	1.2	N/A	N/A	N/A	N/A	N/A	20.3	15.3	26.5	N/A
Median	N/A	N/A	N/A	10	15	10	N/A	N/A	N/A	N/A	N/A	10	60	60	N/A
Motorized	N/A	N/A	N/A	57.0	59.1	57.0	N/A	N/A	N/A	N/A	N/A	14.7	22.0	23.1	N/A
Walking	N/A	N/A	N/A	23.1	20.0	23.4	N/A	N/A	N/A	N/A	N/A	61.7	0.0	0.0	N/A
Other	N/A	N/A	N/A	16.5	17.0	16.5	N/A	N/A	N/A	N/A	N/A	3.2	61.2	48.6	N/A

Table 4.4: (Contd.)

Percent distribution of currently married women aged 15-49 by travel time (minutes) and mode of transportation to nearest facility providing antenatal care, delivery care and family planning services according to rural-urban residence

	Bangladesh			Indonesia			Philippines			Bolivia			Haiti*		
	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP	ANC	DC	FP
NS/missing	N/A	N/A	N/A	3.4	3.9	3.2	N/A	N/A	N/A	N/A	N/A	20.4	16.8	28.2	N/A
Total	N/A	N/A	N/A	100.0	100.0	100.0	N/A	N/A	N/A	N/A	N/A	100.0	100.0	100.0	N/A
N	N/A	N/A	N/A	26,186	26,186	26,186	N/A	N/A	N/A	N/A	N/A	5,334	3,113	3,113	N/A

Table 4.6: Availability of skilled and unskilled health staff

Percent of currently married women aged 15-49 living in clusters in which there is a Community Health Worker (CHW), traditional birth attendant (TBA) trained midwife (TMW).

		Africa				Asia		Latin America		
Countries		Benin	CAR	Mali	Uganda	Zimbabwe	Bangladesh	Indonesia	Bolivia	Haiti
Rural	TBA	51.4	55.6	84.4	76.2	84.1	-	79.1	62.2	**87.7
	TMW	48.9	6.8	19.1	21.1	-	-	39.6	25.6	-
	CHW	59.2	36.3	34.1	27.7	70.1	92.3	16.8	49.9	38.1
	N	2,739	2,562	6,044	4,523	2,674	7,967	18,595	2,177	1,954
Urban	TBA	23.4	16.4	29.7	27.1	7.5	-	56.7	39.6	58.4
	TMW	70.5	23.3	73.7	35.6	-	-	40.3	24.8	-
	CHW	31.5	23.1	76.0	35.6	34.9	64.4	38.5	14.4	19.9
	N	1,459	1,521	2,178	613	1,114	1,013	7,591	3,157	1,159
Total	TBA	41.7	40.9	69.9	70.3	61.6	-	72.6	48.8	76.8
	TMW	56.4	12.9	33.6	22.8	-	-	39.8	25.2	-
	CHW	49.6	31.4	45.2	28.7	59.8	89.1	23.1	28.9	31.3
	N	4,198	4,083	8,222	5,136	3,788	8,980	26,186	5,334	3,113

Notes:

* TBA: Trained Birth Attendant, TMW: Trained mid-wife, CHW: Community Health Worker

** In Haiti data on TBAs and TMWs were combined and cannot be analysed separately.

This data was not collected in the Philippines

Table 5.1: Antenatal Care										
Percent distribution of ALL births 3-5 years preceding the survey for whom women received antenatal care from a skilled provider.										
	Benin ¹	CAR* ¹	Mali ¹	Uganda ²	Zimbabwe ¹	Bangladesh ¹	Indonesia ³	Philippines ³	Bolivia ¹	Haiti** ³
<u>Rural</u>										
Doctor	3.2	3.6	0.6	7.5	14.9	15.8	6.1	23.5	29.9	28.8
Nurse	70.2	47.5	12.0	83.2	77.4	6.8	64.2	54.7	5.6	31.7
Health Worker	3.2	0.0	22.7	0.0	0.0	0.0	7.1	0.0	0.0	0.0
Total Skilled	76.6	51.1	35.3	90.7	92.3	22.6	77.4	78.2	35.5	60.5
TBA	0.6	15.5	2.1	1.0	1.2	0.3	5.5	12.4	0.6	4.6
No One	21.9	33.4	62.3	8.0	6.3	75.8	16.2	9.5	63.1	34.8
N	2,007	1,670	4,477	5,321	1,720	3,458	12,337	4,533	1,703	2,451
<u>Urban</u>										
Doctor	11.4	5.1	2.6	26.1	38.3	44.5	22.5	53.9	67.3	65.7
Nurse	75.9	84.5	57.4	68.9	57.1	9.2	68.3	34.4	0.6	16.8
Health Worker	1.0	0.0	20.6	0.0	0.0	0.0	4.6	0.0	0.0	0.0
Total Skilled	88.3	89.6	80.6	95.0	95.4	53.7	95.4	88.3	67.9	82.5
TBA	0.0	4.3	0.6	0.6	0.9	0.3	0.9	5.7	0.4	0.5
No One	11.5	6.0	18.5	4.2	3.6	43.9	3.4	6.1	31.5	17.0
N	932	1,166	1,541	706	608	392	4,646	4,269	1,877	1,173
<u>Total</u>										
Doctor	5.8	4.2	1.1	9.7	21.0	18.7	10.6	38.3	49.5	40.7
Nurse	72.0	62.7	23.7	81.5	72.0	7.0	65.33333	44.8	3.0	26.9
Health Worker	2.5	0.0	22.2	0.0	0.0	0.0	6.4	0.0	0.0	0.0
Total Skilled	80.3	66.9	47.0	91.2	93.0	25.7	82.3823823	83.1	52.5	67.6
TBA	0.4	10.9	1.7	0.9	1.1	0.3	4.02	9.1	0.5	3.3
No One	18.6	22.1	51.1	7.5	5.6	72.5	12.07	7.8	46.5	29.0
N	2,939	2,836	6,019	6,027	2,328	3,850	16,983	8,803	3,580	3,624
* In the CAR, the category "TBA" also includes a small number of health workers below the level of a doctor, nurse or midwife.										
**In Haiti the category of traditional birth attendant and midwife were combined										
1 All births in the three years preceding the survey,										
2 All births in the four years preceding the survey,										
3 All births in the five years preceding the survey.										

Table 5.2: Gestational Age at Antenatal Care Visits

Percent distribution of all births 3-5 years before the survey by currently married women aged 15-49 by gestational age at first ANC visit by distance to nearest facility providing ANC and median distance to facility by gestational age at first visit (for births to rural women only).

Gestational age at first visit							
Distance	< 6 months	6-7 months	7+ months	No ANC	Don't Know	Total	N
Benin ¹							
<1	67.6	19.2	2.7	9.3	1.3	100.0	495
1-4	55.8	21.6	2.8	17.6	2.1	100.0	382
5-14	41.6	23.1	3.8	30.2	1.2	100.0	804
15+	40.4	25.6	3.8	28.3	1.9	100.0	245
DK/Missing	*	*	*	*	*	100.0	19
Median	3.7	5.6	5.6	7.0	4.9		
N							1,945
CAR ¹							
<1	71.4	14.7	2.2	9.6	2.0	100.0	240
1-4	79.1	14.6	2.5	3.8	0.0	100.0	109
5-14	54.2	16.2	5.5	23.4	0.7	100.0	106
15+	49.7	12.5	2.1	34.7	0.9	100.0	367
DK/Missing	33.2	13.4	2.4	50.2	0.9	100.0	660
Median	3.9	5.9	10.4	25.8	0.0		
N							1,482
Mali ¹							
<1	37.9	16.5	4.3	38.4	2.9	100.0	596
1-4	35.1	18.1	5.4	39.5	1.9	100.0	273
5-14	20.3	9.2	3.5	65.6	1.4	100.0	1,599
15+	19.1	7.6	2.9	69.2	1.2	100.0	1,698
DK/Missing	11.3	3.2	0.0	84.3	1.1	100.0	206
Median	9.0	9.4	11.5	13.2	8.8		
N							4,372
Uganda ²							
<1	51.6	39.7	5.6	3.1	0.0	100.0	450
1-4	46.2	41.0	6.1	6.2	0.4	100.0	1,485
5-14	48.9	36.3	5.9	8.2	0.8	100.0	2,118
15+	41.4	37.9	6.9	13.6	0.2	100.0	610
DK/Missing	71.4	20.0	2.9	5.7	0.0	100.0	92
Median	5.8	5.6	5.9	6.7	6.1		
N							4,754
Zimbabwe ¹							
<1	68.7	25.2	1.0	5.0	0.0	100.0	103
1-4	57.9	32.0	3.4	5.4	1.2	100.0	266
5-14	67.6	21.6	2.0	6.8	1.9	100.0	827
15+	66.9	23.7	2.7	5.8	0.9	100.0	320
DK/Missing	0.0	0.0	0.0	0.0	0.0		0
Median	8.1	7.2	8.2	8.4	10.4		
N							1,515
Indonesia ³							
<1	71.7	11.8	2.7	13.1	0.6	100.0	3,297
1-4	74.2	8.9	2.2	14.0	0.6	100.0	4,380
5-14	68.1	11.5	2.1	17.6	0.6	100.0	3,365
15+	58.3	10.3	3.2	27.9	0.3	100.0	721
DK/Missing	49.7	13.3	3.3	32.1	1.6	100.0	239
Median	3.2	3.4	2.8	4.2	4.3		
N							12,002

Table 5.2: Gestational Age at Antenatal Care Visits

Percent distribution of all births 3-5 years before the survey by currently married women aged 15-49 by gestational age at first ANC visit by distance to nearest facility providing ANC and median distance to facility by gestational age at first visit (for births to rural women only).

Gestational age at first visit							
Distance	< 6 months	6-7 months	7+ months	No ANC	Don't Know	Total	N
Haiti ^{3,4}							
<1	N/A	N/A	N/A	N/A	N/A		N/A
1-4	54.5	12.0	1.8	30.9	0.8	100.0	954
5-14	48.6	10.9	1.4	38.2	0.8	100.0	848
15+	56.0	10.5	1.5	30.8	1.1	100.0	290
DK/Missing	34.6	17.0	2.7	44.5	1.1	100.0	199
Median	5.4	5.4	4.9	6.4	5.3		
N							2,290

¹ All births in the three years preceding the survey, ² All births in the four years preceding the survey, ³ All births in the five years preceding the survey, ⁴ In Haiti, respondents living within the same cluster as the nearest health facility providing antenatal care were not asked distance to the nearest health facility.

* Numbers are too small to give a reliable estimate.

Table 5.3: Distance to Antenatal Care Visits

Percent distribution of all births 3-5 years preceding the survey by currently married women aged 15-49 by total number of ANC visits by distance to nearest facility providing ANC and median distance to facility by total number of ANC visits (for births to rural women only).

Distance	Total Number of antenatal care visits						N
	No ANC	1	2-3	4+	Don't Know	Total	
Benin¹							
<1	9.3	3.1	18.9	67.0	1.7	100.0	495
1-4	17.6	4.2	22.7	53.5	1.9	100.0	382
5-14	30.2	4.0	24.8	39.6	1.3	100.0	804
15+	28.3	2.8	27.4	38.4	3.1	100.0	245
DK/Missing	*	*	*		*	100.0	19
Median	7.0	5.4	5.6	3.5	5.5		
N							1,945
CAR¹							
<1	9.6	3.1	35.5	48.6	3.2	100.0	240
1-4	3.8	2.5	37.6	56.1	0.0	100.0	109
5-14	23.4	5.9	34.7	33.9	2.2	100.0	106
15+	34.7	9.2	28.1	26.2	1.8	100.0	367
DK/Missing	50.2	5.4	22.3	19.7	2.4	100.0	660
Median	25.8	18.4	5.6	2.7	9.9		
N							1,482
Mali¹							
<1	38.4	6.0	18.5	32.7	4.3	100.0	599
1-4	39.2	6.8	18.2	34.3	1.6	100.0	275
5-14	65.6	7.1	11.4	13.7	2.3	100.0	1,604
15+	69.0	4.4	12.1	11.9	2.5	100.0	1,713
DK/Missing	84.4	5.3	3.7	3.5	3.1	100.0	207
Median	13.2	11.1	10.6	7.7	12.1		
N							4,398
Uganda²							
<1	3.1	4.1	32.7	58.5	1.7	100.0	450
1-4	6.2	5.5	39.6	46.5	2.2	100.0	1,485
5-14	8.2	7.1	40.2	42.9	1.6	100.0	2,118
15+	13.6	10.0	46.3	29.6	0.5	100.0	610
DK/Missing	5.7	2.9	30.0	61.4	0.0	100.0	92
Median	6.7	6.8	6.0	5.4	4.6		
N							4,754
Zimbabwe¹							
<1	5.0	1.1	9.9	83.5	0.5	100.0	103
1-4	5.4	0.7	12.8	79.0	2.0	100.0	266
5-14	6.8	1.4	19.7	69.6	2.5	100.0	827
15+	5.8	2.0	21.1	68.8	2.3	100.0	320
DK/Missing	0.0	0.0	0.0	0.0	0.0		0
Median	8.4	11.1	8.2	7.8	10.4		
N							1,515
Indonesia³							
<1	13.1	5.5	23.2	57.0	1.1	100.0	3,297
1-4	14.0	4.7	20.6	59.2	1.6	100.0	4,380
5-14	17.6	5.6	23.6	52.0	1.3	100.0	3,365
15+	27.9	7.6	27.2	36.6	0.7	100.0	721
DK/Missing	32.1	6.8	25.8	32.8	2.6	100.0	239
Median	4.2	3.4	3.5	3.1	3.4		
N							12,002

Table 5.3: Distance to Antenatal Care Visits

Percent distribution of all births 3-5 years preceding the survey by currently married women aged 15-49 by total number of ANC visits by distance to nearest facility providing ANC and median distance to facility by total number of ANC visits (for births to rural women only).

Distance	Total Number of antenatal care visits						N
	No ANC	1	2-3	4+	Don't Know	Total	
Haiti ^{3, 4}							
<1	N/A	N/A	N/A	N/A	N/A		N/A
1-4	30.9	8.1	31.6	28.8	0.6	100.0	954
5-14	38.2	8.5	29.0	23.4	0.9	100.0	848
15+	30.8	7.5	28.9	32.0	0.8	100.0	290
DK/Missing	44.5	11.5	31.3	12.1	0.5	100.0	199
Median	6.4	6.2	5.4	5.2	6.0		
N							2,290

¹ All births in the three years preceding the survey, ² All births in the four years preceding the survey, ³ All births in the five years preceding the survey, ⁴ In Haiti, respondents living within the same cluster as the nearest health facility providing antenatal care were not asked distance to the nearest health facility.

* Numbers are too small to give a reliable estimate.

Table 6.1 Place of Delivery

Percent of all births 3-5 years preceding the survey by place of delivery, according to urban/rural residences.

	Benin ¹	CAR ¹	Mali ¹	Uganda ²	Zimbabwe ¹	Bangladesh ¹	Indonesia ³	Philippines ³	Bolivia ¹	Haiti ³
<u>Rural</u>										
Hospital/Health Ctr.	52.0	22.1	13.1	28.2	61.3	1.7	7.8	13.8	18.4	8.3
Low Level Health Fac.*	4.6	7.8	9.8	1.8	0.1	0.0	0.1	0.1	2.5	0.3
Home	42.0	69.0	76.8	68.9	38.0	98.0	91.8	86.0	78.5	91.0
Number of Births	2,007	1,670	4,477	5,321	1,720	3,458	12,337	4,533	1,703	2,451
<u>Urban</u>										
Hospital/Health Ctr.	77.7	76.1	30.8	73.8	90.7	19.9	42.5	43.6	51.5	42.0
Low Level Health Fac.*	1.0	2.1	47.2	2.4	0.3	1.1	0.3	0.3	10.0	0.2
Home	19.7	21.2	21.6	23.3	8.4	79.0	57.0	56.1	38.1	56.6
Number of Births	932	1,166	1,541	706	608	392	4,646	4,269	1,877	1,173
<u>Total</u>										
Hospital/Health Ctr.	60.4	44.3	17.6	33.5	69.0	3.5	17.3	28.3	35.8	19.2
Low Level Health Fac.*	3.5	5.5	19.4	1.9	0.1	0.3	0.2	0.1	6.5	0.3
Home	34.9	49.4	62.7	63.6	30.3	96.2	82.3	71.5	57.3	79.8
Number of Births	2,939	2,836	6,019	6,027	2,328	3,850	16,983	8,803	3,580	3,624
¹ All births in the three years preceding the survey ² All births in the four years preceding the survey ³ All births in the five years preceding the survey. * Low Level Health facility refers to facilities below a hospital or health centre.										

Table 6.2: Delivery Assistance

Percentage of all births 3-5 years preceding the survey by the type of assistance during delivery.*

Attendant at Delivery	Benin ¹	CAR ¹	Mali ¹	Uganda ²	Zimbabwe ¹	Bangladesh ¹	Indonesia ³	Philippines ³	Bolivia ¹	Haiti ³
Rural										
Skilled Attendant	56.5	24.1	7.8	32.3	61.7	6.4	26.0	36.0	26.0	12.2
TBA/Relative	37.0	74.2	76.9**	54.4	34.9	91.7	73.0	63.5	71.0	87.4
No One	5.9	2.1	15.2	12.8	3.3	1.5	0.5	0.3	2.7	3.16
Urban										
Skilled Attendant	79.9	77.7	70.1	78.8	91.2	34.8	76.4	70.5	66.0	77.4
TBA/Relative	16.7	20.8	26.2**	16.7	8.0	64.5	23.5	29.2	32.0	51.6
No One	3.1	1.4	3.29	4.3	0.8	0.5	0.1	0.1	1.4	3.56
Total										
Skilled Attendant	64.4	45.9	23.7	37.8	69.3	9.5	39.8	53.0	47.0	20.9
TBA/Relative	30.6	52.2	63.9**	50.1	27.9	89.0	59.8	47.0	50.7	75.8
No One	5.0	1.8	12.2	11.8	2.6	1.4	0.4	0.2	2.0	3.3
Total Number of Births	2,939	2,836	6,019	6,027	2,328	3,850	16,983	8,803	3,580	3,624

* Missing cases were not included in the table since they comprise less than 1% of the distribution for all data categories.

** The TBA/Relative category, in the case of Mali also includes deliveries by lower level health workers.

¹ All births in the three years preceding the survey² All births in the four years preceding the survey³ All births in the five years preceding the survey

Table 6.3a: Place of delivery by delivery assistance for RURAL births

Percent distribution of rural births 3-5 years preceding the survey by place of birth and with a skilled attendant at delivery.

	Benin ¹	CAR ¹	Mali ¹	Uganda ²	Zimbabwe ¹	Bangladesh ¹	Indonesia ³	Philippines ³	Bolivia ¹	Haiti ³
<u>Hospital</u>										
Doctor	1.3	0.4	0.2	2.2	7.7	1.0	2.2	12.5	15.8	4.2
Nurse/MW	5.2	4.6	0.7	19.0	35.2	0.4	2.5	1.0	0.7	2.1
Other Skilled	0.4	0.8	0.0	1.0	0.1	0.0	0.0	0.0	0.0	0.0
<u>Health Centre</u>										
Doctor	1.5	0.4	0.1	0.1	0.7	0.2	0.3	0.2	1.2	0.9
Nurse/MW	39.7	6.6	1.6	5.4	17.0	0.0	2.6	0.2	0.5	1.0
Other Skilled	3.4	5.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0
<u>Low Level Facility*</u>										
Doctor	0.3	0.6	0.0	0.1	0.0	0.0	0.0	0.0	2.5	0.0
Nurse/MW	2.9	1.7	4.7	1.6	0.0	0.0	0.0	0.0	0.0	0.2
Other Skilled	0.8	1.7	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
<u>Home</u>										
Doctor	0.0	0.5	0.0	0.1	0.0	1.4	0.3	0.4	2.0	0.2
Nurse/MW	0.3	0.8	0.5	1.4	0.3	3.3	18.0	21.9	1.3	0.5
Other Skilled	0.6	0.6	0.0	1.1	0.2	0.2	0.0	0.0	1.9	0.3
Unskilled/No one	42.9	76.0	92.1	67.3	38.2	93.2	74.0	63.9	73.6	90.5
<u>Total</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	2,007	1,669	4,478	5,321	1,746	3,531	12,337	4,562	1,719	2,451

¹ All births in the three years preceding the survey

² All births in the four years preceding the survey

³ All births in the five years preceding the survey

* Low Level Health facility refers to those facilities below the care -giving abilities of a hospital or health centre.

Note: Missing cases were not included in the table since they comprise less than 1% of the distribution for all data categories.

Table 6.3b: Place of delivery by delivery assistance for URBAN births

Percent distribution of urban births 3-5 years preceding the survey by place of birth and with a skilled attendant at delivery.

	Benin ¹	CAR ¹	Mali ¹	Uganda ²	Zimbabwe ¹	Bangladesh ¹	Indonesia ³	Philippines ³	Bolivia ¹	Haiti ³
<u>Hospital</u>										
Doctor	8.8	1.7	0.9	14.3	23.4	14.3	12.8	36.9	42.8	24.8
Nurse/MW	29.0	20.1	12.9	53.2	38.6	4.2	13.1	2.8	1.6	6.4
Other Skilled	1.0	5.6	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
<u>Health Centre</u>										
Doctor	2.2	0.4	0.4	0.0	0.4	0.2	2.2	2.0	6.7	7.43
Nurse/MW	35.8	37.0	11.6	4.0	28.3	0.9	14.2	1.9	0.3	3.2
Other Skilled	1.0	6.4	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0
<u>Low Level Facility*</u>										
Doctor	0.1	0.4	0.6	0.4	0.0	0.7	0.1	0.0	9.8	0.0
Nurse/MW	0.8	1.0	41.7	2.0	0.0	0.5	0.2	0.0	0.2	0.2
Other Skilled	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
<u>Home</u>										
Doctor	0.0	0.1	0.0	0.2	0.0	3.0	0.4	0.6	2.2	0.4
Nurse/MW	0.8	3.6	1.9	2.0	0.3	10.6	33.2	26.2	1.7	2.1
Other Skilled	0.1	1.2	0.0	0.6	0.0	0.2	22.3	28.2	0.5	0.3
Unskilled/No One	19.8	22.2	29.5	21.0	8.7	65.1	23.5	1.0	33.7	55.2
<u>Total</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	932	1,116	1,541	706	617	394	4,646	4,295	1,895	1,173

¹ All births in the three years preceding the survey.

² All births in the four years preceding the survey.

³ All births in the five years preceding the survey.

* Low Level Health facility refers to those facilities below the care -giving abilities of a hospital or health centre.

Note: Missing cases were not included in the table since they comprise less than 1% of the distribution for all data categories.

Table 6.3c: Place of delivery by delivery assistance for ALL births.

Percent distribution of total births 3-5 years preceding the survey by place of birth and with a skilled attendant at delivery.

	Benin ¹	CAR ¹	Mali ¹	Uganda ²	Zimbabwe ¹	Bangladesh ¹	Indonesia ³	Philippines ³	Bolivia ¹	Haiti ³
<u>Hospital</u>										
Doctor	3.7	1.0	0.4	3.6	11.8	2.4	5.1	24.3	30.0	10.8
Nurse/MW	12.8	11.0	3.8	23.0	36.1	0.8	5.4	1.8	1.2	3.5
Other Skilled	0.6	2.7	0.0	1.0	0.0	0.0	0.1	0.0	0.0	0.0
<u>Health Center</u>										
Doctor	1.7	0.4	0.2	0.1	0.6	0.2	0.9	1.1	4.1	3.0
Nurse/MW	38.4	19.0	4.2	5.3	20.0	0.1	5.8	1.0	0.4	1.7
Other Skilled	2.6	5.6	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0
<u>Low Level Facility*</u>										
Doctor	0.2	0.5	0.2	0.1	0.0	0.1	0.0	0.1	6.3	0.0
Nurse/MW	2.2	1.4	14.2	1.6	0.0	0.0	0.1	0.1	0.1	0.2
Other Skilled	0.6	1.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
<u>Home</u>										
Doctor	0.0	0.3	0.0	0.1	0.0	1.6	0.3	0.5	2.2	0.3
Nurse/MW	0.4	1.9	0.9	1.5	0.3	4.0	22.2	24.0	1.5	1.0
Other Skilled	0.5	0.9	0.0	1.0	0.2	0.3	0.0	0.0	1.2	0.3
Unskilled/No one	35.1	54.6	76.1	61.9	30.5	90.4	60.2	47.1	52.7	79.1
<u>Total</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	2,939	2,836	6,019	6,027	2,364	3,926	16,983	8,858	3,614	3,624

¹ All births in the three years preceding the survey.

² All births in the four years preceding the survey.

³ All births in the five years preceding the survey.

* Low Level Health facility refers to those facilities below a hospital or healthcentre.

Note: Missing cases were not included in the table since they comprise less than 1% of the distribution for all data categories.

Table 6.4: Distribution of RURAL births by distance to the nearest health facility

Percent distribution of rural births 3-5 years preceding the survey by place of delivery and by distance to the nearest health facility providing delivery care.

	Benin ¹			CAR ¹			Mali ¹			Uganda ²		
	Health Facility	Else-where	N	Health Facility	Else-where	N	Health Facility	Else-where	N	Health Facility	Else-where	N
<1 km	85.6	14.4	496	58.9	41.1	270	37.4	62.6	625	58.2	41.8	363
1-4 km	62.0	38.0	402	52.3	47.7	121	20.6	79.4	282	38.4	61.6	1,110
5-14 km	40.2	59.8	834	29.1	70.9	114	13.4	86.6	1,673	24.5	75.5	1,834
15+ km	44.1	55.9	255	23.7	76.3	386	13.3	86.7	1,682	14.6	85.4	712
DK/Missi	*	*	20	19.6	80.4	779	4.9	95.1	215	7.3	92.7	108
Median	3.2	6.9		3.0	16.3		8.9	12.1		4.8	6.9	
N			2,007			1,670			4,477			4,127

¹ All births in the three years preceding the survey.

² All births in the four years preceding the survey.

Table 6.4 (contd.)

Percent distribution of rural births 3-5 years preceding the survey by place of delivery by distance to the nearest health facility providing delivery care.

	Zimbabwe ¹			Indonesia ³			Haiti ^{3*}		
	Health Facility	Else-where	N	Health Facility	Else-where	N	Health Facility	Else-where	N
<1 km-	68.7	31.3	112	9.2	90.8	1,759	N/A	N/A	0
1-4 km-	70.0	30.0	291	9.5	90.5	2,640	N/A	9.3	90.7
5-14 km-	60.3	39.7	945	7.2	92.8	2,136	N/A	5.9	94.1
15+ km-	55.4	44.6	399	3.2	96.8	537	N/A	4.4	95.6
DK/Missing-	0.0	0.0	0	5.8	94.2	241	N/A	5.1	94.9
Median-	7.8	8.8		3.1	3.7			5.3	8.9
N			1,747			7,314			1,458

³ All births in the five years preceding the survey.

* Question was not asked if facility was within respondent's cluster.

Table 6.5: Distribution of Rural births with a skilled attendant by distance to the nearest delivery facility

Percent distribution of rural births 3-5 years preceding the survey by type of delivery assistance, by distance to the nearest health facility providing delivery care

	Benin ¹			CAR ¹			Mali ¹			Uganda ²		
	Skilled	Unskilled	N	Skilled	Unskilled	N	Skilled	Unskilled	N	Skilled	Unskilled	N
<1 km	84.4	15.6	496	45.7	54.3	270	58.6	41.4	625	62.0	38.0	363
1-4 km	63.2	36.8	402	53.2	46.8	121	33.6	66.4	282	41.1	58.9	1,110
5-14 km	40.5	59.5	834	23.9	76.1	115	20.1	79.9	1,673	27.4	72.6	1,834
15+ km	42.3	57.7	255	18.4	81.6	386	21.6	78.4	1,682	15.4	84.6	712
DK/Missing	*	*	20	14.1	85.9	779	6.9	93.1	215	7.3	92.7	108
Median	3.3	7.0		3.2	15.6		8.3	12.5		4.8	6.9	
N			2,007			1,670			4,477			4,127
¹ All births in the three years preceding the survey. ² All births in the four years preceding the survey.												

Table 6.5 (contd.)									
Percent distribution of rural births 3-5 years preceding the survey by type of delivery assistance, by distance to the nearest health facility providing delivery care.									
	Zimbabwe ¹			Indonesia ³			Haiti ^{3*}		
	Skilled	Unskilled	N	Skilled	Unskilled	N	Skilled	Unskilled	N
<1 km	85.4	14.6	112	33.7	66.3	1,759	N/A	N/A	N/A
1-4 km	83.6	16.4	291	28.1	71.9	2,640	40.0	60.0	376
5-14 km	76.1	23.9	945	25.2	74.8	2,136	40.6	59.4	408
15+ km	71.7	28.3	399	12.3	87.7	537	30.6	69.4	393
DK/Missing	0.0	0.0	0.0	26.2	73.8	241	27.6	72.4	280
Median	8.0	9.8		3.0	3.9		6.6	9.6	
N			1,747			7,314			1,458
N/A: Not Asked									
* Question was not asked if facility was within respondent's cluster.									
³ All births in the five years preceding the survey.									

Table 6.6: Distribution of RURAL births by time to the nearest delivery facility

Percent distribution of rural births 3-5 years preceding the survey by type of delivery assistance, by time to the nearest health facility providing delivery care.

	Benin ¹			CAR ¹			Mali ¹			Uganda ²		
	Skilled	Unskilled	N	Skilled	Unskilled	N	Skilled	Unskilled	N	Skilled	Unskilled	N
<30 minutes	71.3	28.7	868	44.0	56.0	342	47.4	52.6	871	48.6	51.4	759
30-59 minutes	43.9	56.1	391	45.9	54.1	104	28.0	72.0	911	32.8	67.2	777
60+ minutes	45.0	55.0	728	19.7	80.3	445	20.6	79.4	2,331	27.0	73.0	2,483
DK/Missing	*	*	20	14.1	85.9	779	7.5	92.5	365	7.3	92.7	108
Median	20.4	45.6		25.3	60.6		40.4	80.3		60.1	60.9	
N	2,007			1,670			4,477			4,127		

¹ All births in the three years preceding the survey

² All births in the four years preceding the survey

³ All births in the five years preceding the survey

* Numbers are too small to give a reliable estimate.

Table 6.6: (contd.)

Percent distribution of rural births 3-5 years preceding the survey by type of delivery assistance, by time to the nearest health facility providing delivery care.

	Zimbabwe ¹			Indonesia ³			Haiti ³		
	Skilled	Unskilled	N	Skilled	Unskilled	N	Skilled	Unskilled	N
<30 minutes	83.8	16.2	306	30.9	69.1	4,973	43.1	56.9	175
30-59 minutes	81.4	18.6	306	22.6	77.4	1,308	37.5	62.5	44
60+ minutes	74.8	25.2	1,106	12.6	87.4	772	36.2	63.8	941
DK/Missing	(40.9)	(59.1)	29	27.7	72.3	262	27.4	72.6	299
Median	60.8	90.7		13.0	15.9		90.6	120.2	
N	1,747			7,314			1,458		

N/A: Not Asked.

Table 7.1: Distance to the nearest hospital

Percent distribution of currently married women age 15-49 who live within 10 kilometres of a hospital by rural-urban residence.

Residence	Benin	CAR	Mali	Uganda	Zimbabwe	Indonesia	Philippines	Bolivia	Haiti
<u>Rural</u>									
Within 10 km	14.6	7.8	3.2	24.4	16.4	20.8	64.0	25.8	41.5
N	2,739	2,562	6,044	4,523	2,674	18,595	4,323	2,177	1,954
<u>Urban</u>									
Within 10 km	64.9	72.5	65.4	85.8	70.5	69.8	87.7	72.6	58.3
N	1,459	1,521	2,178	614	1,114	7,591	4,638	3,157	1,159
<u>Total</u>									
Within 10 km	32.1	31.9	19.7	31.7	32.3	35.0	76.3	53.5	47.7
N	4,198	4,083	8,222	5,136	3,788	26,186	8,961	5,334	3,113

Table 7.2: Time to the nearest hospital

Percent distribution of currently married women aged 15-49 who live within 1 hour of a hospital by rural-urban residence.

Residence	Benin	CAR	Mali	Uganda	Zimbabwe	Indonesia	Philippines	Bolivia	Haiti
<u>Rural</u>									
Within 1 hour	37.5	10.5	18.3	39.1	43.5	59.6	73.7	48.3	25.3
N	2,739	2,562	6,044	4,523	2,674	18,595	4,323	2,177	1,954
<u>Urban</u>									
Within 1 hour	78.8	69.1	78.6	92.6	87.5	80.5	69.3	72.9	57.1
N	1,459	1,521	2,178	613	1,114	7,591	4,638	3,157	1,159
<u>Total</u>									
Within 1 hour	51.9	32.3	34.3	45.5	56.5	65.7	71.4	62.8	37.1
N	4,198	4,083	8,222	5,136	3,788	26,186	8,961	5,334	3,113

Table 7.3: Distance to treatment for delivery complications

Percent distribution of currently married women aged 15-49 according to the distance from a place reported to treat delivery complications by urban/rural residence.*

Residence	Benin	Mali	Uganda	Zimbabwe
<u>Rural</u>				
<1	8.1	8.7	5.9	0.5
1-4	3.4	4.3	16.7	0.8
5-14	22.1	29.2	34.7	9.4
15+	64.8	56.4	40.0	83.7
DK/Missing	1.6	1.4	2.7	5.5
Median	20.8	20.1	10.7	35.2
N	2,739	6,044	4,523	2,674
<u>Urban</u>				
<1	31.3	31.7	22.6	3.9
1-4	26.1	33.6	68.3	25.7
5-14	16.0	18.7	5.0	43.4
15+	25.2	15.2	2.2	26.9
DK/Missing	1.4	0.7	2.0	0.0
Median	2.8	2.6	1.9	7.8
N	1,459	2,178	613	1,114
<u>Total</u>				
<1	16.1	14.8	7.9	1.5
1-4	11.3	12.1	22.9	8.2
5-14	20.0	26.4	31.2	19.4
15+	51.0	45.5	35.5	67.0
DK/Missing	1.5	1.2	2.6	3.9
Median	15.5	12.4	10.0	25.6
N	4,198	8,222	5,136	3,788

* Percent distribution of women who responded to the question: "If a woman has a complication in delivery, what is the name of the nearest place she can be treated."

Table 8.1: Current use of contraception by currently married women

Percent distribution of currently married women aged 15-49 currently using contraceptive methods.

	Benin	CAR	Mali	Uganda	Zimbabwe	Bangladesh	Indonesia	Philippines	Bolivia	Haiti
<u>Rural</u>										
Any Modern Method	2.1	1.4	1.9	5.1	37.3	35.1	50.5	21.9	6.9	9.5
Any Trad./Folk Method	11.5	10.8	1.4	4.3	4.9	8.2	2.0	14.9	24.5	3.1
Any Method	15.0	12.1	3.3	12.2	44.2	43.3	52.5	36.8	31.3	12.8
Number of Women	2,739	2,562	6,044	4,522	2,674	7,967	18,595	4,323	2,177	1,954
<u>Urban</u>										
Any Modern Method	5.8	6.4	11.6	28.1	53.9	44.6	55.8	27.6	25.3	19.5
Any Trad./Folk Method	12.3	12.8	4.6	4.5	2.9	9.8	4.4	15.4	29.6	6.4
Any Method	19.0	19.2	16.2	34.5	57.6	54.4	60.2	43.0	55.0	26.6
Number of Women	1,459	1,521	2,178	612	1,114	1,013	7,591	4,638	3,157	1,159
<u>Total</u>										
Any Modern Method	3.4	3.2	4.5	7.8	42.2	36.2	52.1	24.9	17.7	28.0
Any Trad./Folk Method	13.0	11.5	2.2	6.0	6.0	9.5	2.7	15.1	27.6	20.5
Any Method	16.4	14.8	6.7	14.8	48.1	44.6	54.7	40.0	45.3	39.8
Number of Women	4,198	4,083	8,222	5,134	3,788	8,980	26,186	8,961	5,334	3,113

Table 8.2: Use of a modern method of contraception by distance to the nearest facility offering family planning

Percent distribution of currently married rural women aged 15-49 by modern contraceptive method use and by distance to the nearest facility providing family planning services.

Distance to health facility	Benin			CAR			Mali			Uganda		
	Currently Using MM	Not Using MM	N	Currently Using MM	Not Using MM	N	Currently Using MM	Not Using MM	N	Currently Using MM	Not Using MM	N
<1 km	3.8	96.2	738	2.3	97.7	437	6.4	93.6	730	5.6	94.4	616
1-4 km	2.0	98.0	561	2.3	97.7	182	3.0	97.0	259	6.6	93.4	1,133
5-14 km	0.9	99.1	972	1.1	98.9	201	1.4	98.6	1,887	5.6	94.4	1,565
15+ km	1.8	98.2	444	0.9	99.1	649	1.4	98.6	2,185	2.7	97.3	980
DK/Missing	(12.1)	(87.9)	25	1.2	98.8	1,093	0.5	99.5	982	2.5	97.5	229
Median	0.0	5.3		1.7	10.1		5.5	13.2		5.1	6.2	
N			2,739			2,562			6,043			4,523

Table 8.2: (Contd.)

Percent distribution of currently married rural women aged 15-49 by modern contraceptive method use, by distance to the nearest facility providing family planning services.

Distance to health facility	Zimbabwe			Indonesia			Bolivia		
	Currently Using MM	Not Using MM	N	Currently Using MM	Not Using MM	N	Currently Using MM	Not Using MM	N
<1 km	46.7	53.3	208	52.7	47.3	4,597	12.8	87.2	276
1-4 km	38.4	61.6	488	50.9	49.1	7,637	20.3	79.7	211
5-14 km	36.6	63.4	1,371	49.8	50.2	5,050	5.5	94.5	601
15+ km	34.7	65.3	607	47.3	52.7	1,097	2.6	97.4	517
DK/Missing	0	0	0	26.3	73.7	214	4.3	95.7	571
Median	7.8	8.0		3.2	3.4		3.4	9.0	
N			2,674			18,595			2,176

Table M1

The odds ratio of delivery at a health facility for RURAL births. Women living beyond 5 km compared to women living within 5 Km and women with some education compared to those with no education.

Independent Variables	All	Benin	CAR	Haiti	Indonesia	Mali	Uganda	Zimbabwe
Distance (< 5 km)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Distance (5 + km)	0.752*	0.239*	0.697*	0.732	0.695*	0.364*	0.420*	0.630*
Education (1 + years)	1.069	3.336*	2.271*	4.565*	2.996*	1.609*	2.648*	3.231*
N	22,800	2,007	1,670	1,458	7,314	4,477	4,127	1,747
* $\alpha=0.001$								

Table M2

The odds ratio of delivery with a skilled attendant for RURAL births. Women living beyond 5 km compared to women living within 5 Km of a health facility and women with some education compared to those with no education.

Independent Variables	All	Benin	CAR	Haiti	Indonesia	Mali	Uganda	Zimbabwe
Distance (< 60 min)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Distance (60 + min)	0.849*	0.478*	0.706	1.150	0.374*	0.491*	0.625*	0.693*
Education (1 + years)	1.764*	3.783*	2.395*	2.312*	4.350*	1.868*	2.560*	3.054*
N	22,031	2,007	1,670	1,458	7,314	4,477	4,127	1,747
* $\alpha=0.001$								

Table M3

The odds ratio of use of a modern method of contraception for RURAL women living beyond 5 km compared to women living within 5 Km of a health facility and women with some education compared to those with no education.

Independent Variables	All	Benin	CAR	Bolivia	Indonesia	Mali	Uganda	Zimbabwe
Distance (< 5 km)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Distance (5 + km)	0.681*	0.391*	0.563	0.452*	0.961	0.452*	0.821	0.825
Education (1 + years)	5.854*	2.984*	3.926*	4.571*	1.950*	4.932*	2.841*	2.058*
N	39,314	2,739	2,562	2,176	18,595	6,043	4,523	2,674
* $\alpha=0.001$								

12. Appendix B: Synopsis of the Variations in Individual Country Questionnaires

The five African countries, Benin, CAR, Mali, Uganda and Zimbabwe, as well as Bolivia used the core questionnaire as a basic model, while Bangladesh, Philippines, Indonesia and Haiti made large alterations to the core.

In Benin key informants were asked to name the nearest private doctor, pharmacy, health centre, clinic and hospital. Distance, time, mode of transport and services provided (ANC, DC, CI, and FP) were asked of each. If the facility or provider did not provide FP services the same details were asked of the nearest facility/provider who did.

In CAR, key informants were asked to name the nearest private doctor and clinic in urban areas only and the nearest pharmacy, health centre and hospital in both urban and rural areas. Distance, time, mode of transport and services provided (ANC, DC, CI, and FP) were asked of each. If the facility or provider did not provide FP services the same details were asked of the nearest facility/provider who did.

In Mali key informants were asked to name the nearest private doctor, pharmacy, health centre, community health centre, clinic and hospital. Distance, time, mode of transport and services provided (ANC, DC, PNC, CI, surgery and FP) were asked of each. If the facility or provider did not provide FP services the same details were asked of the nearest facility/provider who did.

In Uganda key informants were asked to name the nearest private doctor; pharmacy or drug shop; dispensary, sub-dispensary or delivery maternity unit; health centre; and hospital. Distance, time, mode of transport, and service provided (ANC, DC, CI, and FP) were asked of each. If the facility or provider did not provide FP services the same details were asked of the nearest facility/provider who did.

In Zimbabwe key informants were asked to name the nearest private doctor, pharmacy,

health centre and hospitals. In rural areas, respondents were also asked about rural health centres. Distance, time, mode of transport and services provided (ANC, DC, CI, and FP) were asked of each. If the facility or provider did not provide FP services the same details were asked of the nearest facility/provider who did.

In Indonesia the community questionnaire was shortened to eight questions. Key informants were asked if any of thirteen different facilities or service providers were present in or close to the area. These included, hospitals, maternities, health centres and posts, village midwives, TBAs, private midwives, and others. Distances, time and mode of transport to services were recorded only if the facility or service provider was NOT in the area. Details about types of service provided, such as family planning or ANC, were not recorded in the community questionnaire.

In Bangladesh the questionnaire was radically different. Key informants were asked whether family planning worker visited the area on a regular basis and what services they offered. They were also asked about the availability, timing and services provided at peripatetic clinics, (including the availability of pills, condoms, ORS, CI, vitamin A, GM and ANC). One question on distance to the nearest *Thana* (health facility) headquarters was included.

In the Philippines key informants were asked basic community data. In addition, they were asked to name the type of the nearest facility that provided health OR family planning services using a precoded answer that included government hospital, health station, RHU / puericulture centre, private hospital or clinic. Details of distance, time, mode of transport and services provided were asked to this centre. If the centre was not a hospital then the same details were requested about the nearest hospital. The same questions were also asked about mobile outreach services.

In Bolivia key informants were asked to name the nearest private doctor, pharmacy, health centre, clinic and hospital. If FP services were provided, they were also asked about distance, time and mode of transport. If the facility or provider did not provide FP services the same details were asked of the nearest facility/provider who did.

In Haiti key informants were asked to name the nearest hospital, health centre, dispensary, mobile clinic, private doctor, community health worker, TBA and pharmacy. Distances, time and mode of transport were only recorded if the service/facility was not in the area (not defined). The types of services provided were only recorded if the service facility was not in the area AND was less than 30 km away.

13. Appendix C: Improvements/Modifications to the SAM

This section of the report reviews some of the problems that were encountered during the writing in order to record the lessons learned in the process and to make some broad recommendations for future activities of this type.

Preparing the report required reanalyses of large portions of the data and, in the case of CAR, dropping the country from the interpretative analysis because of the poor data quality. The main problem underlying these difficulties was that the way countries chose to adapt the questionnaire resulted in little uniformity in how the data were collected. The questionnaires used in Bangladesh, Haiti, the Philippines and Indonesia were so different in form and content from the original module and from each other that it was impossible to derive some of the information for the tables. This created significant problems in terms of making valid international comparisons.

Whilst the primary purpose of any DHS survey data will be to provide information about health needs for national programming planning purposes, a secondary purpose is to provide a comparative database that can be used for a variety of purposes that include advocacy, research and international policy and priority setting. As discussed in the chapter on the community surveys, facility data are inherently less comparable across countries than population-based health and demographic data. The challenge of implementing any type of facility survey is, therefore, to balance country-specific needs for adaptation to obtain locally relevant information while still preserving international comparability. Two potential improvements could be made in this regard.

- First, consideration could be given to structuring some generic comparability into the questionnaire from the outset of the project so that a core set of key indicators is collected in every country.
- Secondly, major categories of information such as the type of health facility or type of health provider should be standardised

across countries at the time of the implementation of the survey. For example, there is tremendous variation in the names used to describe health facilities across countries, and health facilities should be categorised according to their infrastructure, the range or type of services they provide (primary, secondary or tertiary care, for example,) or the facility staffing level (whether they were staffed by a skilled or unskilled health worker).

Both of these approaches would require an improvement in survey documentation. The measures would however not obviate the necessity to exercise caution when making inter-country comparisons, whatever approach was selected, because of the tremendous heterogeneity in the organisation, content and quality of health services.

In addition to these measures, a standardised approach would also need to be built into data processing for the survey. Since the recording of facility distance is so critical to all subsequent SAM analyses, it is important that the same procedure for recording and processing distance data is adopted for all countries.

Although recording perceived distance is important, a further improvement to the method would be the incorporation of GPS location data for all facilities identified and all clusters surveyed. DHS surveys are already collecting locational data on each cluster using GPS. This method has the added advantage that other data sources such as new facility locations can be added and linked at a later stage.

Another major consideration, if the SAM methodology is considered to have a future role, is that the content and design of the questionnaire should also be reviewed. Some important omissions in the current content of the questionnaire should be noted:

- To obtain a picture of the entire health services environment, questions related to communities' use and experience of the "infor-

mal” health sector should be incorporated, since in most cases this is where the vast majority of health care delivery is taking place. The questionnaire, as it currently stands, makes almost no reference to the informal sector beyond asking briefly about traditional birth attendants.

- The questionnaire should be broadened to ask about postnatal care, newborn care and AIDS care at minimum. These issues were considered by very few countries apart from Uganda and should be included in the core module.
- The most effective way of asking valid questions about the availability of health facilities and distances to the nearest health facility should be explored. For example: Are the most accurate answers obtained when asking first about the nearest facility or are better data obtained by asking key informants where women seek care for each service, e.g. ANC, DC, pregnancy complications, etc.? Also, how are distance data best obtained? Is perceived distance the principle determinant of service use or are travel time and mode of transport more important? This study could be combined with the use of GPS reading to validate the reported travel distances.

14. Appendix D: The SAM Standard Questionnaire

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO				
1	IDENTIFICATION	<div>(NAME OF LOCALITY)</div> <div>CLUSTER NUMBER <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table></div>					
2	TYPE OF LOCALITY	TOWN/CITY.....1-- VILLAGE.....2 COUNTRYSIDE.....3--	--> 3 --> 3				
2A	TYPE OF VILLAGE	NUCLEAR.....1 DISPERSE.....2					
3	NUMBER OF INHABITANTS OF LOCALITY	< 500.....1 500 - < 2000.....2 2000 - < 5000.....3 5000 - < 10000.....4 10000 - < 20000.....5 20000 - < 50000.....6 50000 - < 100000.....7 100000 +.....8	>7				
4	TYPE OF MAIN ACCESS ROAD	PAVED: ASPHALT OR CEMENT...1 PAVED: STONE (GOOD).....2 PAVED: STONE (BAD).....3 UNPAVED.....4 NO ROAD.....5					
5	DISTANCE IN KM'S TO NEAREST LOCALITY OF 20000+ INHABITANTS	< 10.....1 10 - < 20.....2 20 - < 30.....3 30 - < 50.....4 50 - < 100.....5 100 +.....6					
6	TYPES OF PUBLIC TRANSPORT COMMONLY USED TO NEAREST LOCALITY OF 20000+ INHABITANTS (CIRCLE ALL APPLICABLE)	BUS.....1 TAXI.....1 BOAT.....1 TRAIN.....1 NONE.....1					

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO
7	IS CLUSTER COVERED BY A COMMUNITY BASED CONTRACEPTIVE DISTRIBUTION PROGRAM? YES 1 -----> NO 2 (GO TO 8) ↓	7A METHODS AVAILABLE* COST <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div> <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div> <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div>	
8	DOES A FAMILY PLANNING FIELD WORKER COVER THE CLUSTER? YES 1 -----> NO 2 (GO TO 9) ↓	8A HOW OFTEN PER MONTH DOES SHE VISIT? TIMES <input type="text"/> <input type="text"/> 8B WHICH METHODS DOES HE/SHE PROVIDE? <div>METHODS* COST</div> <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div> <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div> <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div>	
9	IS THE CLUSTER VISITED BY A MOBILE CLINIC? YES 1 ----> NO 2 (GO TO 10) ↓	9A HOW OFTEN PER MONTH? TIMES <input type="text"/> <input type="text"/> 9B WHICH METHODS DOES THE MOBILE CLINIC PROVIDE? <div>METHODS* COST</div> <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div> <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div> <div><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></div>	
10	IS THE CLUSTER COVERED BY A TRADITIONAL BIRTH ATTENDANT? YES 1 -----> NO 2 (GO TO 11) ↓	10A IS THE TRADITIONAL BIRTH ATTENDANT TRAINED IN MODERN TECHNIQUES? YES 1 NO 2	
11	IS THE CLUSTER COVERED BY A TRAINED MIDWIFE?	YES 1 NO 2	

*METHODS: 01 - Pill 05 - Condom
 02 - IUD 06 - Female Sterilization
 03 - Injection 07 - Male Sterilization
 04 - Vaginal Methods 08 - Periodic Abstinence

12. AVAILABILITY OF PUBLIC SERVICES NEAREST TO THE CLUSTER.

	(1)		(2)	(3)	(4)
	IN LOCALITY		DISTANCE IN KM'S [a]	MOST COMMON TRANSPORT [b]	TRAVEL TIME TO GET THERE (MINUTES)
	YES	NO			
A. EDUCATION	1	2			
1 Primary School	1	2	<input type="text"/>	<input type="text"/>	<input type="text"/>
2 Secondary School	1	2	<input type="text"/>	<input type="text"/>	<input type="text"/>
3 Higher/Technical	1	2	<input type="text"/>	<input type="text"/>	<input type="text"/>
B. GENERAL SERVICES					
1 Post Office	1	2	<input type="text"/>	<input type="text"/>	<input type="text"/>
2 Weekly Market	1	2	<input type="text"/>	<input type="text"/>	<input type="text"/>
3 Cinema	1	2	<input type="text"/>	<input type="text"/>	<input type="text"/>
4 Sewer System	1	2			
5 Garbage Disposal	1	2			

CODES: [a] 97 = 97+
00 = Less than 1

[b] Motorized 1
Animal 2
Walking 3
Cycling 4
Other 5

13. DETAILS ABOUT EACH OF THE HEALTH SERVICES OF DIFFERENT TYPE CLOSEST TO THE CLUSTER. (COLS 3 TO 10 ONLY FOR THOSE SERVICES WITHIN 30 KM'S OF THE CLUSTER.)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	IN LOCALITY?	DISTANCE FROM CLUSTER IN KM'S [a]	TYPE OF MOST COMMON TRANSPORT	TIME TO GET THERE [b]	NUMBER OF DOCTORS [a]	NUMBER OF NURSES [a]	DAYS OPEN	HOURS OPEN (NUMBER)	SERVICES AVAILABLE	YEAR IN WHICH SERVICE STARTED
A. HOSPITAL (NAME) (LOCALITY)	YES 1 NO 2 WHERE? (LOCALITY)	<div>IF: 30+</div>	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	(MINUTES)			MONDAY 1 TUESDAY 1 WEDNESDAY 1 THURSDAY 1 FRIDAY 1 SATURDAY 1 SUNDAY 1 OTHER:		MCH 1 EMERGENCY 1 GENERAL 1 FAM. PLAN. 1 ORAL REHY-DRATION 1	
B. CLINIC (NAME) (LOCALITY)	YES 1 NO 2 WHERE? (LOCALITY)	<div>IF: 30+</div>	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	(MINUTES)			MONDAY 1 TUESDAY 1 WEDNESDAY 1 THURSDAY 1 FRIDAY 1 SATURDAY 1 SUNDAY 1 OTHER:		MCH 1 EMERGENCY 1 GENERAL 1 FAM. PLAN. 1 ORAL REHY-DRATION 1	
C. HEALTH CENTRE (NAME) (LOCALITY)	YES 1 NO 2 WHERE? (LOCALITY)	<div>IF: 30+</div>	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	(MINUTES)			MONDAY 1 TUESDAY 1 WEDNESDAY 1 THURSDAY 1 FRIDAY 1 SATURDAY 1 SUNDAY 1 OTHER:		MCH 1 EMERGENCY 1 GENERAL 1 FAM. PLAN. 1 ORAL REHY-DRATION 1	

CODES: [a] 97 = 97+ [b] 997 = 97+
 98 = DK 998 = DK
 00 = Less than 1 000 = Less than 1

13. (CONTINUED)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	IN LOCALITY?	DISTANCE FROM CLUSTER IN KM'S [a]	TYPE OF MOST COMMON TRANSPORT	TIME TO GET THERE [b]	NUMBER OF DOCTORS [a]	NUMBER OF NURSES [a]	DAYS OPEN	HOURS OPEN (NUMBER)	SERVICES AVAILABLE	YEAR IN WHICH SERVICE STARTED
D. PHARMACY	YES 1 NO 2	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> IF: 30+ 	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> (MINUTES)					ORAL REMY-DRATION PACKETS AVAILABLE? YES 1 NO 2	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div>
(NAME)	WHERE?									
(LOCALITY)										
E. PRIVATE DOCTOR	YES 1 NO 2	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> IF: 30+ 	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> (MINUTES)					ORAL REMY-DRATION PACKETS AVAILABLE? YES 1 NO 2	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div>
(NAME)	WHERE?									
(LOCALITY)										

CODES: [a] 97 = 97+ .[b] 997 = 97+
 98 = DK 998 = DK
 00 = Less than 1 000 = Less than 1

14. DETAILS ABOUT EACH OF THE FAMILY PLANNING SERVICES OF DIFFERENT TYPE CLOSEST TO THE CLUSTER. (COLS 3 TO 10 ONLY FOR THOSE SERVICES WITHIN 30 KM'S OF THE CLUSTER.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	IN LOCALITY?	DISTANCE FROM CLUSTER IN KM'S [a]	TYPE OF MOST COMMON TRANSPORT	TIME TO GET THERE [b]	METHODS AVAILABLE	COST OF METHODS	YEAR METHOD FIRST AVAILABLE	NUMBER OF DOCTORS FOR FAM. PLAN. [a]	NUMBER OF NURSES FOR FAM. PLAN. [a]	DAYS OPEN FOR FAM. PLAN.	HOURS OPEN FOR FAM. PLANNING (NUMBER)
A. HOSPITAL	YES 1 NO 2 WHERE? (LOCALITY)	<div><div></div><div></div><div></div></div> IF: 30+ 	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	<div><div></div><div></div><div></div></div> (MINUTES)	PILL 1 IUD 1 INJECTIONS 1 CONDOM 1 FEM. STER. 1 MALE STER. 1 OTHER 1	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	MONDAY 1 TUESDAY 1 WEDNESDAY 1 THURSDAY 1 FRIDAY 1 SATURDAY 1 SUNDAY 1 OTHER: _____ _____	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
B. CLINIC	YES 1 NO 2 WHERE? (LOCALITY)	<div><div></div><div></div><div></div></div> IF: 30+ 	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	<div><div></div><div></div><div></div></div> (MINUTES)	PILL 1 IUD 1 INJECTIONS 1 CONDOM 1 FEM. STER. 1 MALE STER. 1 OTHER 1	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	MONDAY 1 TUESDAY 1 WEDNESDAY 1 THURSDAY 1 FRIDAY 1 SATURDAY 1 SUNDAY 1 OTHER: _____ _____	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>
C. HEALTH CENTRE	YES 1 NO 2 WHERE? (LOCALITY)	<div><div></div><div></div><div></div></div> IF: 30+ 	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	<div><div></div><div></div><div></div></div> (MINUTES)	PILL 1 IUD 1 INJECTIONS 1 CONDOM 1 FEM. STER. 1 MALE STER. 1 OTHER 1	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	MONDAY 1 TUESDAY 1 WEDNESDAY 1 THURSDAY 1 FRIDAY 1 SATURDAY 1 SUNDAY 1 OTHER: _____ _____	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>

CODES: [a] 97 = 97+
98 = DK
00 = Less than 1
[b] 997 = 97+
998 = DK
000 = Less than 1

14. (CONTINUED)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	IN LOCALITY?	DISTANCE FROM CLUSTER IN KM'S [a]	TYPE OF MOST COMMON TRANSPORT	TIME TO GET THERE [b]	METHODS AVAILABLE	COST OF METHODS	YEAR METHOD FIRST AVAILABLE	NUMBER OF DOCTORS FOR FAM. PLAN. [a]	NUMBER OF NURSES FOR FAM. PLAN. [a]	DAYS OPEN FOR FAM. PLAN.	HOURS OPEN FOR FAM. PLANNING (NUMBER)
D. PHARMACY	YES 1 NO 2	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> IF: 30+	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> (MINUTES)	PILL 1 IUD 1 INJECTIONS 1 CONDOM 1 FEM. STER. 1 MALE STER. 1 OTHER 1	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>
(NAME)	WHERE?										
(LOCALITY)											
E. PRIVATE DOCTOR	YES 1 NO 2	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> IF: 30+	MOTORIZED 1 ANIMAL 2 WALKING 3 CYCLING 4 OTHER 5	<div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> (MINUTES)	PILL 1 IUD 1 INJECTIONS 1 CONDOM 1 FEM. STER. 1 MALE STER. 1 OTHER 1	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>	<div style="border: 1px solid black; width: 40px; height: 40px; margin-bottom: 5px;"></div>
(NAME)	WHERE?										
(LOCALITY)											

CODES: [a] 97 = 97+ [b] 997 = 97+
 98 = DK 998 = DK
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